

UNITED STATES DISTRICT COURT

DISTRICT OF NEBRASKA

JARED L. WHITT

Plaintiff

CIVIL ACTION NO.

VS.

8:12-CV-00358

UNION PACIFIC RAILROAD
COMPANY

Defendant

FEBRUARY 28, 2014

DEPOSITION OF DOUGLAS CASA, PH.D.

APPEARANCES:

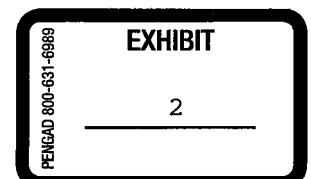
For the Plaintiff:

BRENT COON AND ASSOCIATES
3801 E. Florida Avenue, Suite 905
Denver, Colorado 80210
BY: JAMES L. COX, JR., ESQ.

For the Defendant:

LAMSON, DUGAN AND MURRAY, LLP
10306 Regency Parkway Drive
Omaha, Nebraska 68114
BY: DAVID J. SCHMITT, ESQ.

JULIE BLIER, BA, LCR 0093, NOTARY PUBLIC



1 . . . Deposition of DOUGLAS CASA,
2 Ph.D., taken on behalf of the Defendant, in the
3 hereinbefore entitled action, pursuant to the
4 Federal Rules of Civil Procedure, before Julie
5 Blier, BA, LCR, and duly qualified Notary Public
6 in and for the State of Connecticut, at the
7 Nathan Hale Inn, 855 Bolton Road, Storrs,
8 Connecticut 06268, commencing at 9:00 a.m., on
9 February 28, 2014.

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DOUGLAS CASA, PH.D., with an
address of 75 Maple Road, Storrs,
Connecticut 06268, having first been
duly sworn, deposed and testified as
follows:

BY MR. SCHMITT:

Q All right. Sir, my name is Dave Schmitt,
I'm a lawyer, I represent Union Pacific Railroad
Company in a lawsuit that has been filed by Jared
Whitt. I understand that you're been designated as an
expert witness by Mr. Whitt, is that correct?

A Yes.

Q I'm here to take your deposition today to
find out about all opinions that you have in regards
to this case as well as all bases and reasons for your
opinions. All right?

So if at any point during this deposition
you don't understand my question or I'm unclear please
ask me to repeat or rephrase it and I'll be happy to
do so. Okay?

A Yes.

Q If at any time you would like to take a
break we can certainly do so, you just need to let us
know. All right?

A Yes.

1 Q What is your occupation?

2 A I'm a professor at the University of
3 Connecticut.

4 Q What do you do at the University of
5 Connecticut as a professor?

6 A I'm a professor in the department of
7 kinesiology.

8 Q What is that?

9 A It's a study kind of human movement so it
10 might involve things like exercise science and sports
11 medicine and biomechanics and strengthening
12 conditioning, things like that.

13 Q Are there certain aspects of that field that
14 are particularly relevant to the types of opinions
15 that you're rendering in this case?

16 A Yes. Well, my background is in sports
17 medicine and exercise physiology so it's kind of a
18 combination of those two factors.

19 (Defendant's Exhibit 39 marked for
20 Identification.)

21 BY MR. SCHMITT:

22 Q Okay. I'm going to hand you what's been
23 marked as Exhibit 39. Is that a true and accurate of
24 your curriculum vitae?

25 A I'm just noting that the date is June of

1 2013 so I think I have one that's maybe updated
2 through November 2013 that I can get forwarded to you,
3 it would just be a couple of additional publications.

4 Q Okay.

5 A But everything else is accurate to this
6 point.

7 Q Let's do this then, if you would forward a
8 copy of your updated CV to Jim Cox and I would ask
9 that he forward it to me.

10 A Yes.

11 MR. COX: I'll do that.

12 BY MR. SCHMITT:

13 Q And the only changes that need to be made to
14 Exhibit 39 to make it more accurately reflect your
15 experience, education and training is that there have
16 been a couple of additional publications?

17 A Yes, I would say there's probably ten
18 publications from that point and there might be some
19 presentations as well.

20 Q Were there any publications or presentations
21 that were particularly relevant to the issues you're
22 discussing in this case?

23 A To be honest they probably all are only
24 because they're all related to heat and hydration, my
25 publications, we could actually do a quick PubMed

1 search and see what came up since that date but I'll
2 make sure you get those.

3 Q All right. In reviewing your curriculum
4 vitae, and it's fairly extensive, at least this
5 Exhibit 39, I count it looks like it's 82 pages, is
6 that right?

7 A Yes, that's the June one, correct?

8 Q Yes.

9 A Yes.

10 Q As I review this at least from my
11 observation it appears as though that your specialty,
12 your background is all related to the sports field, is
13 that fair?

14 A No, I have a lot of experience with military
15 and with general stresses of exercise that would be
16 relevant for laborers as well.

17 Q What percentage of your practice is related
18 to sports related issues, in other words, I know
19 you're a professor, you teach various courses, we can
20 read the CV, it speaks for itself, there's, I can
21 continually see, for example, the word sports come up
22 for sports players, things like that, what I'm trying
23 to do is get an understanding of what percentage of
24 your background, your practice, the current work that
25 do is really related to sports medicine, in that

1 field?

2 A Maybe 50 percent. I would, whenever I have
3 a paper that's published related to heat stroke and
4 exertional heat stroke or hydration topics that's not
5 specific just to sports, I mean, that might be
6 specific to a soldier, a laborer or just people in
7 general.

8 Q In the military what percentage of your
9 practice is spent with military related issues?

10 A Well, like I said, a lot of it is
11 overlapping because a good percentage of the work that
12 I do is related to all those things, for instance,
13 like a paper that's published on exertional heat
14 stroke, cold water immersion being the gold standard
15 for treatment, that's relevant to all, anybody who
16 suffers an exertional heat stroke so it's hard to
17 pigeonhole it into one domain.

18 When I'm writing that I'm thinking about a
19 soldier or a farm worker or an athlete having a heat
20 stroke, and when I do a study on hydration and its
21 effect on cognitive performance that can be a lay
22 person or a soldier or an athlete.

23 So it's really hard to pigeonhole a study
24 because a lot of it is just looking at physiological
25 effects of people doing intense exercise in the heat

1 and it's not necessarily an athlete. So it's people
2 who are physically active and have issues related to
3 their exercise, heat tolerance and, you know, things
4 like that. That would be very, very hard for me to
5 decide how to bridge that out.

6 Q I understand from your testimony that the
7 work that do you will have overlap into multiple
8 different areas. I guess my question is more related
9 to -- let me ask it this way, what I'm trying to find
10 out is what perhaps the primary focus would be of the
11 work do you, for example, I understand that you might
12 have done some work about exertional heat stroke but,
13 and that you are saying that it can have applications
14 to multiple fields.

15 The reason for my question is that again as
16 I read your CV it just seems to be a recurring theme,
17 that the vast majority virtually all of your CV
18 appears to be focused, that the work you were doing
19 was focused on the sports field or perhaps secondarily
20 some in the military field.

21 A Like I said it's hard to look at it that
22 way. One way I would consider looking at it is my
23 focus area is exertional heat stroke, issues that
24 affect exercise heat tolerance, and hydration issues.
25 That's probably the best way of putting the work that

1 I do.

2 Q So there are three points, exertional heat
3 stroke --

4 A Issues that affect exercise heat tolerance,
5 and hydration.

6 Q And hydration?

7 A I mean that is also part of number two but
8 it's enough work there that it could stand alone.

9 To give you an example of the things in
10 number two could be like body cooling studies, heat
11 acclimatization, work to rest ratios, sleep issues and
12 things that could affect someone's exercise heat
13 tolerance.

14 When I talk about heat stroke I'm talking
15 about prevention, recognition and treatment of heat
16 stroke especially exertional heat stroke.

17 Q You use the term heat stroke and then
18 exertional heat stroke, is there a difference?

19 A Well, there's something called classical
20 heat stroke.

21 Q What is classical heat stroke?

22 A That happens to people who are not related
23 to exercise. A couple of examples would be like when
24 infants are left in cars that are all closed off in
25 oppressive heat, or elderly people during a heatwave

1 that are like in apartment buildings that aren't air
2 conditioned, so they're not exercising but the heat
3 becomes so overwhelming for that person that they
4 can't regulate their body temperature anymore.

5 Q So if that is classical heat stroke then is
6 the other category --

7 A Is exertional heat stroke. So it's related
8 to physical activity, the things we see in farm
9 workers, laborers, soldiers, athletes.

10 Q Is the treatment required for classical heat
11 stroke than it is for exertional heat stroke?

12 A The basic premise is to get their
13 temperature down as fast as possible, that's
14 consistent across both.

15 If I had a 85 to 90-year-old person who had
16 co-morbidities I don't know if we would recommend them
17 going into a cold water immersion tub because, you
18 know, that might be too much of a shock for that
19 person so we would maybe cool them by other methods
20 besides the cold water immersion.

21 An otherwise healthy person like a soldier
22 or an athlete or laborer who is like in their 20s we
23 would use cold water immersion because we would get
24 their temp down as fast as humanly possible because
25 the most pressing thing is the hyperthermia, where the

1 person who's 90 years old there are a lot of issues
2 you're dealing with besides them just being hot.

3 Q When you say co-morbidity factors give me an
4 example of what you're talking about.

5 A Well, people who are susceptible to that
6 classic heat stroke, those elderly people, it's
7 usually people who have like cardiovascular
8 difficulties already, they might have diabetes, they
9 might have respiratory issues.

10 So they already, it's the people who usually
11 have some conditions already that are usually
12 susceptible to that classic heat stroke.

13 Q All right. We'll come back to that and talk
14 about that in greater detail.

15 A Okay.

16 Q When I review your CV there's a section
17 under, it's entitled publications, and at least this
18 version, Exhibit 39, I understand it's a little out of
19 the date, but in this section it indicates there are
20 138 different published items, is that right?

21 A Yes. I think it's at 150 or 151 right now.

22 Q Tell me about this, I note that there are
23 various names many times with each of the respective
24 publications, is that accurate?

25 A Yes.

1 Q Why is that?

2 A Those are the people that usually
3 contributed to the research study.

4 Q Okay.

5 A So it's usually a couple of professors and
6 usually some grad students that pulled off that
7 research study and it's a massive amount of time and
8 effort that goes into a project like that so it's
9 usually the people who are getting credit for the
10 effort.

11 Q What's the significance of the ordering of
12 the names?

13 A It's a good question. Usually the lead
14 author in our work is usually the lead Ph.D. student
15 who ran the project and did most of the writing. Then
16 usually their supervisor is either second or last,
17 last is sometimes a place of honor for the person
18 who's kind of the overall director, second is often
19 the supervisor of that Ph.D. student. Often then
20 they'll be listed alphabetically a lot of times where
21 it's just everybody contributed and it's hard to tease
22 out who contributed the most.

23 On some of the more prestigious kind of
24 position statements or consensus statements my name is
25 first because I was the lead author on, I don't know,

1 five or six or seven documents that have come out in
2 the last years. One came out last summer so it's not
3 in your hand right now, looking at preventing sudden
4 death in secondary schools.

5 Q So generally if your name is not first that
6 means that you were not the lead author on that
7 particular publication?

8 A Yes, I was considered a co-author.

9 Q Correct. Were then a lot of these
10 publications actually students, Ph.D. --

11 A They're my --

12 Q -- candidates?

13 A -- students.

14 Q Okay.

15 A So I'm supervising them.

16 Q All right.

17 A And I'm helping them land jobs down the road
18 so being a lead author is very prestigious for them to
19 try to get a job.

20 Q And because of your assistance as a
21 professor overseeing their work then that gives you
22 the honor of being able to be identified as one of the
23 contributors to that publication?

24 A Well, it's usually I'm the one who usually
25 got the grant and usually had the idea for the study,

1 I'm usually the one who spearheaded the whole
2 operation, but that Ph.D. student is often the one who
3 did the kind of nitty gritty of some of that stuff.

4 Q But don't the Ph.D. students, aren't they
5 usually encouraged to come up with their own topic?

6 A Well, we usually have global things that we
7 work on and then they'll pick out certain ideas within
8 projects that we're doing.

9 Q There's a section entitled grants under
10 consideration and that goes on for page after page.

11 A Well, grants under consideration is blank,
12 there's nothing there, it's probably grants with all
13 those others.

14 Q I see.

15 A When I updated the resume at that moment
16 there wasn't one being considered at that moment. so
17 I'm sorry, I should have put NA underneath that
18 section.

19 Q Thanks for the clarification. So at least
20 under funded grants why are you including those in
21 your CV?

22 A Usually people in the academic world put
23 down the grants that they solicited and obtained,
24 that's very typical, it's kind of a key part of our
25 tenure promotion process.

1 Q What's a grant?

2 A A grant would be like a research grant that
3 you would get funding to do a study or it might be a
4 service grant like you're providing educational
5 services maybe for the CDC or NIH or something like
6 that. It's what's providing funding to your operation
7 to, you know, promote the cause and promote the work
8 that you do.

9 Q There's many of these entries, if not most
10 actually, indicate it starts out with the year and
11 then it says principal investigator, what's a
12 principal investigator?

13 A That's usually the person who's in charge of
14 that particular study. So you might have a principal
15 investigator who is in charge or a
16 co-principal-investigator if there's a couple of
17 people in charge, or you might be a co-investigator on
18 a study where you're not in charge but you're involved
19 with the study.

20 Q So with these grants then as your work are
21 you going to, for example, the industry or the
22 corporation or the government, whatever it might be,
23 asking them to donate money to fund whatever the
24 project is that you would like to work on?

25 A It could be one of three probably common

1 ways. One is they come to us and ask us to do a
2 project. Second, we could go to them with an idea of
3 which we think there might be a mutual interest.
4 Third might be an application process, it's just an
5 open application process and then they award to be
6 what they deem to be the most worthy.

7 Q Which of those three scenarios typically
8 occurs with your practice?

9 A In the last three or four years we've been
10 fortunate that we have a lot of people coming to us
11 now because we have established an even greater
12 reputation so it's probably a pretty good balance
13 between those, between those three.

14 Q Okay. I note in the CV there's various
15 times there's a reference to NATA, what is that?

16 A NATA is the National Athletic Training, I'm
17 sorry, National Athletic Trainer's Association, that's
18 the governing body for athletic trainers in our
19 country.

20 Q Okay. Continuing through the CV there's
21 various professional presentations, various
22 categories, is the same generally true, that if, of
23 what you indicated earlier, that if your name isn't
24 first that you were a contributor to that particular
25 work, that abstract, whatever it might be, but that

1 the person listed first would have been the primary
2 author or presenter?

3 A If there are presentations it's usually the
4 lead person that is the one actually standing up and
5 doing the presentation, but the other co-authors are
6 the ones who work together on the research study.

7 Q So you may have provided information that
8 then the person giving the physical presentation could
9 use, rely on in their presentation?

10 A Yes, or we work together on the research
11 study and they're just the person -- there's one
12 research study sometimes that could have four
13 presentations and there might be four different lead
14 people.

15 Q Okay. I notice just in the last page, hobby
16 section, it says advocate of equal access for women in
17 sport. Tell me about that.

18 A Oh, just trying to make sure that women have
19 the same opportunities like whether it be like, for
20 instance, in college they didn't used to have woman's
21 pole vaulting, they didn't used to have women's
22 steeple chase, and up until 1972 the longest women's
23 event in the Olympics was the 800 meters, they didn't
24 even allow women to even run a mile. I don't know if
25 you know back in the 1920s a bunch of women collapsed

1 following one of the mile races and they banned
2 anything longer than a mile. I have two daughters so
3 we work very hard with organizations to try promote
4 same opportunities.

5 Q I note from your CV that you have
6 involvement with the Korey Stringer Institute?

7 A Yes.

8 Q And your title is what?

9 A I'm the chief operating officer.

10 Q What is the Korey Stringer Institute?

11 A Okay. Korey Stringer was a football player
12 for the Minnesota Vikings and he passed away in 2001,
13 August 1st, he had suffered a heat stroke during the
14 second day of their training camp. And after he
15 passed away his widow had numerous lawsuits that
16 ensued and I helped her as an expert witness through
17 some of those.

18 When she settled with the NFL, her and
19 Commissioner Goodell made a commitment to have a
20 lasting legacy in Korey's name, and when they made
21 that decision to have that they both reached out to me
22 to ask if we would be interested in hosting that
23 institute at the University of Connecticut.

24 And obviously that was a big honor and we
25 were interested in doing that so we've, it's a

1 phenomenal opportunity for me professionally to have
2 this forum in terms of education and research and
3 something to be able to pursue some of the things to
4 enhance safety for soldiers and laborers and athletes.

5 Q What percentage of your time is spent with
6 the Korey Stringer Institute versus the other work
7 that do you just with the University the Connecticut?

8 A That's a good question. The fact of the
9 matter is everything we do at the Korey Stringer
10 Institute I was doing before the Korey Stringer
11 Institute existed because I mean our main focus is
12 research, education, policy changes, or advocating for
13 changes and like mass media outreach so we can get
14 good information out to people, all of those things I
15 was doing because KSI ever existed.

16 So this just gave us a greater vehicle to
17 make it takes place. I mean in a sense 100 of my work
18 is professor slash Korey Stringer Institute, you
19 can't, they're never really separated because even all
20 the grad students I have and the grad student classes
21 I have we're teaching the stuff that is the work of
22 the Korey Stringer Institute.

23 Some of the titles of my classes are
24 entitled preventing sudden death in sport, exertional
25 heat stroke, legal issues of sudden death, you know,

1 so there are lot of issues that we deal with.

2 Q Is your position with the Korey Stringer
3 Institute, is that a paid position?

4 A No.

5 Q Okay.

6 A I receive 100 percent of my salary from the
7 state as a professor. So the great benefit of the
8 Korey Stringer Institute is it allows funding for the
9 grad students and employees who work at KSI to promote
10 the mission of KSI and really promote overall goals of
11 enhancing safety.

12 Q That's the primary purpose of that Korey
13 Stringer Institute here today?

14 A Our big theme is preventing sudden death in
15 sport, like trying to have physical activity happen in
16 a safe and productive manner.

17 MR. COX: Do you think you could move the
18 speaker a little closer? I'm having a little
19 trouble picking you up.

20 THE WITNESS: Sure.

21 MR. SCHMITT: Is this phone even on?

22 THE COURT REPORTER: No, it was a backup
23 in case Skype didn't work.

24 MR. SCHMITT: Okay.

25

1 BY MR. SCHMITT:

2 Q How old are you, sir?

3 A Forty-five.

4 Q All right. Have you spent almost your
5 entire career here in connection with the University
6 of Connecticut in some capacity?

7 A Since 1993 until now so a little over 20
8 years. I've been here all of those 20 years except
9 for two years I was a professor down in Georgia after
10 I got my Ph.D. I was a Ph.D. student here from '93 to
11 '97, professor down in Georgia until '99 and then
12 since that date I've been here.

13 Q Have you ever been employed by the Federal
14 Railroad Administration, the FRA?

15 A I have not.

16 Q Have you ever been employed by OSHA?

17 A I have not.

18 Q Have you ever been employed by any railroad?

19 A No.

20 Q Have you ever worked in the rail industry in
21 any respect?

22 A No.

23 Q Have you ever been, for example, to a rail
24 yard?

25 A I might have been when I was younger but not

1 in relation to like what I know now, so I don't want
2 to, you know, it's a tough answer because I think I
3 might have been when I was kid so I don't want to give
4 an inaccurate answer. Related to this topic and my
5 expertise, I would say no.

6 Q But other than perhaps as a kid traveling
7 through a rail yard that's the extent of your physical
8 presence in a rail yard?

9 A Yes.

10 Q Have you ever physically seen equipment and
11 machines that are used to install track?

12 A Yes, on this case and in previous cases
13 people have sent me pictures.

14 Q So the extent of your exposure --

15 A I'm sorry, and some video.

16 Q So the extent of your exposure to the
17 machines would be simply by looking at photos or
18 videos, not physical presence?

19 A Yes.

20 Q So you've never sat for an example on an
21 anchor applicator machine?

22 A I have not.

23 Q You mentioned that in some prior, this case
24 and some prior cases that people may have sent you
25 photos or videos, my question is how many cases have

1 you been involved in that dealt with some type of
2 railroad related issue?

3 A Is it okay if I look here?

4 Q Absolutely.

5 A It's either the third or the fourth case.

6 Q For the record what you're looking at is
7 your report?

8 A Yes.

9 Q Which is dated November 30, 2013?

10 A Yes.

11 MR. SCHMITT: What we'll do is we'll go
12 ahead and mark that as Exhibit 40.

13 (Defendant's Exhibit 40 marked for
14 Identification.)

15 A Just if you want to make a note number seven
16 and number eight in this report were both train
17 related cases.

18 BY MR. SCHMITT:

19 Q We're looking on page --

20 A Nine.

21 Q -- of Exhibit 40?

22 A Yes.

23 Q Okay.

24 A Number 11 also, that one I worked for the
25 defense on, the other two were plaintiff.

1 Q So seven, eight and 11?

2 A Yes.

3 Q Okay.

4 A Specific to a train employee.

5 Q Yes.

6 A And the current case. So I was right, it
7 was three previous.

8 Q Seven involved a train welder with the CSX
9 Railroad?

10 A Yes.

11 Q You said that you were retained by the
12 plaintiff?

13 A Yes.

14 Q What happened just generally in that case?

15 A I honestly don't remember them. He was, I
16 know he was working extensively outside and I think on
17 one day he had some difficulty and then on the next
18 day he suffered a heat stroke.

19 Q When we use the term heat stroke, stroke is
20 a term of significance, correct?

21 A Yes.

22 Q All right. A heat stroke is something
23 different than, for example, a heat illness which I
24 see you have listed as item number eight?

25 A Yes.

1 Q Is heat stroke much more severe than a heat
2 illness?

3 A Well, a heat illness could include heat
4 stroke but a heat stroke is much more serious. Heat
5 illness is a family of conditions, potential
6 conditions.

7 Q All right. Did you give a deposition with
8 the CSX case?

9 A It says here official report only so that
10 one never went, that was settled before my deposition
11 was needed.

12 Q Do you still have that report?

13 A I do believe that I definitely would.

14 Q Let's see item eight was a railroad
15 conductor who suffered a heat illness, do you recall
16 what occurred in that case?

17 A I honestly don't remember great detail on
18 some of these, it's been a few years right now and I
19 honestly didn't brush on them at all.

20 I do remember him being a conductor and I
21 remember there being difficulty for him on his run
22 that day where he actually had to get out and do a lot
23 of manual work that he typically didn't do and it
24 caused him to have some difficulty that day.

25 Q Do you know as a conductor what he was, you

1 said he was running in and out, running in and out of
2 what?

3 A He was having to get out of the train a lot
4 of times to deal with stuff that was ahead on the
5 track that he typically wasn't doing but I guess it
6 was a unique day.

7 Q You gave a deposition in that case?

8 A Yes.

9 Q Do you still have that deposition?

10 A Absolutely.

11 Q Then last item was number 11 and tell me
12 about that one.

13 A I honestly have to double check that case.
14 It was definitely a laborer but I don't remember the
15 specifics of the case.

16 I do know it was for the defense and the
17 defense had asked me if they thought it was a heat
18 stroke or not, and that was my level of involvement
19 because I did not think it was a heat stroke in that
20 particular case.

21 Q So you were only asked to render an issue
22 about diagnosis of the condition?

23 A Yes, well, they wanted me to consider what
24 were the possible conditions this person might have
25 been suffering from and what was likelihood that it

1 was some of these different ones because I think the
2 plaintiff was making the complaint that he was sure it
3 was heat stroke but we didn't have compelling evidence
4 that it was a heat stroke.

5 Q It said that you assisted, is this a law
6 firm?

7 A Yes.

8 Q Okay.

9 A I tried to include at least the lawyer's
10 names or the law firm for each of them.

11 Q Okay.

12 A So at least you could always Google them and
13 find them.

14 Q You didn't give a report in that case?

15 A No, it says opinion provided, so I
16 definitely submitted something.

17 Q No deposition though?

18 A Correct.

19 Q Do you know or are you certain sitting here
20 today that that workers' compensation case involved in
21 a railroad?

22 A I'm not 100 percent sure.

23 Q Okay.

24 A I remember someone being, I can't remember
25 if it was a rail yard or someone was I believe loading

1 and unloading supplies and I'm just not positive where
2 the setting was.

3 Q Okay. With item number seven was the report
4 that you prepared something that was then produced to
5 the attorney, the plaintiff's attorney that retained
6 you that then was used in the lawsuit itself?

7 A I'm assuming that they used it in the
8 process of trying to obtain a settlement, yes.

9 Q Okay. The deposition you said in item
10 eight, that's readily available to you?

11 A Yes. If it's not to me I'm sure the lawyer
12 could get it to me.

13 Q Okay.

14 A I'm assuming in most cases they usually send
15 me the PDF of the deposition after, especially more in
16 the recent years.

17 Q Okay. What I would like you to do if you
18 could email a copy, look at your records and email a
19 copy of that deposition to Mr. Cox and then I would
20 ask that he forward that to me.

21 A Sure. Item eight deposition.

22 MR. COX: That's the deposition in which
23 case?

24 THE WITNESS: Trumain Moorer case,
25 M-o-o-r-e-r. It was Trumain Moorer versus

1 Norfolk Southern Railroad Company. It's number
2 eight on my list.

3 MR. COX: Okay.

4 BY MR. SCHMITT:

5 Q If the report that you used in item number
6 seven that we discussed, if that was produced, in
7 other words, by that plaintiff's lawyer to the other
8 side, in other words, used by both parties, if it
9 wasn't just simply held only by the plaintiff I would
10 also like you to forward a copy of that to Jim Cox and
11 ask that that be produced.

12 A Sure.

13 MR. COX: I will do that.

14 A Number seven. I'm really 99 percent sure
15 they produced that to the other side because I
16 remember discussions after.

17 BY MR. SCHMITT:

18 Q All right. Same with item 11.

19 A This one I'm not positive about.

20 Q Okay. Can you tell me what -- strike that.

21 Before we get to that your CV lists,
22 itemizes 19 cases that you've worked on as an expert,
23 item number 20 which is this case and then some other
24 cases that are just beginning. Does then exhibit --

25 A You said CV, do you mean my opinion?

1 Q Yes, thank you for clarifying. Bad
2 question. Let me start over.

3 Your report, Exhibit 40, does the Exhibit 40
4 identify all of the cases that you have worked on as a
5 retained expert witness in litigation?

6 A Up through November 30th.

7 Q Yes.

8 A So there are other cases that have, you
9 know, obviously progressed in the last five or six
10 months and that's why I tried to, you know, these are
11 ones that were really like in the beginning and I
12 wasn't even sure if I was going to be moving forward
13 with helping.

14 So there's probably one or two others that
15 it looks more likely I'm going to be helping with them
16 right now. I don't think -- none of them are train
17 situations. One is a police officer at an academy.
18 One is a soldier. Same law firm actually and it's
19 both working for the defense in both of those cases.

20 Q So currently to the present date you've been
21 involved as a retained expert in litigation matters
22 around 27, 28 times?

23 A Well, I think it's actually -- six were, a
24 lot of people seek out me, see if I'm interested in
25 helping but I don't always pick up every case that I'm

1 asked to help with so I would move that to 22 or 23
2 right now that I could say for sure.

3 Q Okay. Explain to me then, you said that
4 there are some cases where you may be consulted but
5 you don't, I think you used the term pick up, tell me
6 what you mean.

7 A A lot of it has to do with time reasons. At
8 the University of Connecticut I'm allowed one
9 consulting day per week during the academic year, so I
10 have those 30 days to work with during the academic
11 years and then I have some more days potentially in
12 the summer.

13 So I have to get consulting approval for any
14 cases I work with. So I have to make a very accurate
15 guess of what my time investment will be on a case
16 that I decide to work with. So if I'm not able to do
17 it I might sometimes suggest other people who could
18 assist whoever contacted me.

19 And also I sometimes look into the, after I
20 get more information, a lot of times, a lot, there's
21 probably literally another 40 to 50 cases that I don't
22 list here that people don't end up pursuing litigation
23 because they sought out my opinion and a lawyer will
24 just run things by me like an hour or two on the phone
25 and say is this worth it, so I think they're even

1 considering do they accept this client, you know, is
2 this a case worth picking up.

3 So I will talk them through it, like is this
4 something, a legitimate case or not and, you know,
5 obviously if they don't pursue it, you know, you don't
6 see it on this list here and I don't charge that
7 person for that hour or two of my time that I'm kind
8 of just giving my informal time.

9 Q With this consulting work then that you do
10 you indicated that you have to get approval, tell me
11 what percentage of your time is spent work as a
12 consultant expert witness.

13 A It also, just so you know, my consulting
14 approvals don't only include cases, like I also have
15 to get consulting approval if I serve as an adviser to
16 a corporation or if I go give a presentation somewhere
17 and get paid so there's a lot of different things that
18 UConn approves for consulting, anything that's outside
19 my normal job.

20 So of my consulting work I would say about
21 half of it is legal cases and about half is work that
22 I might do, for instance, if I serve on a board of
23 advisers for a company, or a lot of time like a
24 company will ask for my opinion on products or
25 innovation.

1 But so the bottom line, it probably works
2 out to be between 15 and 20 days a year I work on
3 legal cases. Is that what you were looking for?

4 Q It is.

5 A Okay. They might not be full days but it
6 just gives you an idea.

7 Q So 15 to 20 out of the 365 day year?

8 A Yes.

9 Q Okay. The fees that you charge for
10 consulting work in legal related matters are \$400 per
11 hour?

12 A Yes.

13 Q Then if you, for example, come to Nebraska
14 to testify would you be charging also then for your
15 travel expenses obviously?

16 A Yes.

17 Q Okay. Are the fees that you earn as a
18 consultant, are those fees then that would go to you
19 directly rather than to the University of Connecticut?

20 A Yes, that goes to me personally.

21 Q Okay. Of the cases that you've been
22 involved as a legal expert or -- strike that.

23 Of the cases where you've worked as an
24 expert witness retained consultant in a legal related
25 matter, litigation, what percentage is for the

1 plaintiff or employee versus the defendant?

2 A That's a good question. I'm frequently
3 asked that question. I think I've worked for the
4 defense now on five cases. Do you want me to point
5 those out to you?

6 Q Sure.

7 A It would be number two.

8 Q And you're looking at Exhibit 40?

9 A Yes.

10 Q Okay.

11 A Number 11. What you might consider labeling
12 21 and 22 because I just told you there's a case for a
13 soldier and a case for a police academy training that
14 took place. So that is up to four and --

15 Q In those last two you were retained by the
16 employer?

17 A Yes.

18 Q Okay.

19 A It was, to be honest just so you know, it
20 was actually a company that makes a supplement and
21 they're blaming the supplement on the heat illness.
22 That's one of the parties that's being sued in that
23 case.

24 Q Okay.

25 A So not just the only one.

1 Q All right.

2 A So that's four right there and there might
3 be one other new case that I'm failing to think of
4 right now.

5 Q Have you ever been retained by Jim Cox
6 before this case or his law firm, Brent Coon and
7 Associates?

8 A Never, this is the first time.

9 Q Do you know how Mr. Cox became aware of the
10 services that you're providing in this case?

11 A Yes. I actually brought it because I'm also
12 always asked this question, when I started the
13 relationship.

14 On May 31st, 2013 I received an email from
15 Jim and he had said he had a friend named John Moss
16 who was the lawyer out of Atlanta, and if you look on
17 my opinion which I think you said was Exhibit 40 he's
18 the lawyer that I worked with on case number eight.
19 So that's the connection.

20 Q Okay. That the first contact that you had
21 with Mr. Cox was the email of May 21, 2013?

22 A May 31st.

23 Q Oh, May 31st?

24 A Yes.

25 Q What other communications have you had with

1 Mr. Cox in written form?

2 A I have a few emails here, most of them are
3 kind of procedural like, let me see, you know, things
4 like this when someone sends me something that I'm
5 supposed to review I get like an official letter.

6 Q What you just handed me is a letter to you
7 dated February 10, 2014 from Mr. Cox's law firm
8 enclosing the report of James V. Shea, Jr.? Right?

9 A Yes. These are just examples since you're
10 asking but like he was giving me an update of when the
11 deposition might be, when my official opinion might be
12 due.

13 I had asked if I could have a slight
14 extension possibly on when the opinion be due because
15 it was right at the end of the semester and I think he
16 have contacted you about that.

17 Q He did.

18 A And then I also had inquired I think when he
19 knew when the trial might be and I told him dates I
20 would be on vacation.

21 Q Could I just take a look at all of these.
22 You've identified various written communications from
23 Mr. Cox's office. If you want to just hand me that
24 other one that you mentioned too.

25 A Sure (handing).

1 Q And you brought with you here today your
2 entire work file?

3 A I did. I also brought my computer because
4 some of it is not printed out and they're just PDFs.

5 Q What are the PDFs that would be on your
6 computer?

7 A I did, I tried to be exhaustive here with
8 everything that I have so I don't necessarily have to
9 find any for you. There are some additional items
10 since November 30th that I did bring with me so I can
11 at least show you but this is exhaustive up to
12 November 30th.

13 Q Okay. For our record, so you're looking at
14 your report, Exhibit 40, page one identifies items A
15 through T and those are first of all up through the
16 date of that report the items that you looked at?

17 A Yes.

18 Q So when you reference documents on your
19 computer that are in PDF, are the only PDF documents
20 on that computer documents that are identified here in
21 Exhibit 40?

22 A I am going to double check that in a break
23 but I believe everything I have since then I either
24 printed out or brought with me, but if something was
25 maybe enormously long I may not have printed it out.

1 Q During a break you can feel free to take a
2 look at that and we'll confirm that.

3 And then you said since your report you
4 received additional items, what additional items have
5 you received?

6 A So there's a printout of an OSHA Technical
7 Manual.

8 Q Okay. For the record this is entitled OSHA
9 Technical Manual (OTM), Section III, Chapter 4, is
10 that right?

11 A Yes.

12 Q Okay. Who provided this to you?

13 A That was Jim Cox.

14 Q And the date, at least the print date on it
15 is 2/25 of 2014 which was only, well, less than a week
16 ago?

17 A Yes.

18 Q Why do you understand you were provided with
19 this document?

20 A I had asked for some information regarding
21 if we knew of any OSHA standards just for general
22 recommendations.

23 Q So this was research that Mr. Cox did for
24 you to find these OSHA standards to --

25 A I had done some Googling myself, I wanted to

1 see if they meshed up but that was something he shared
2 with me after we had the discussion.

3 Q What other documents --

4 A It was the same day I got this one just so
5 you know.

6 Q So the same day you received the OSHA
7 Technical Manual, you handed me also then a single
8 page entitled Appendix C ACGIH Threshold Limit Values
9 for Hot Environments, correct?

10 A Yes.

11 Q That was provided to you again by Mr. Cox?

12 A Yes.

13 Q All right. Any other documents that you
14 have been provided or reviewed in connection with your
15 work in this case that we have not discussed?

16 A Yes. There are, I'm guessing it was an
17 email discussion, the two people who came to pick up
18 Jared the day after he had the condition, so one is
19 Brandon Peppers and one is Jared's wife. I got those
20 yesterday, two days ago I think.

21 Q So you've handed me a four page document
22 that indicates it's from a Brandon Peppers to Donna
23 Baker?

24 A That's the first two pages, and then the
25 next two are from Jared's wife.

1 Q It says from Priscilla Whitt to Donna Baker?

2 A Yes.

3 MR. SCHMITT: Okay. Here's what I would
4 like to do so that we keep track of what we're
5 looking at.

6 This last item, this question and answer
7 session, these four pages, I'm going to mark as
8 Exhibit 41.

9 (Defendant's Exhibit 41 marked for
10 Identification.)

11 MR. COX: Are you marking both statements
12 individually?

13 MR. SCHMITT: They were all stapled
14 together as one document, Jim, as four pages.

15 A They were two different emails. Sorry about
16 that. I did that for my own convenience.

17 (Defendant's Exhibit 42 marked for
18 Identification.)

19 MR. SCHMITT: Okay. So we've marked as
20 Exhibit 41 the document from Brandon Peppers to
21 Donna Baker dated February 27, 2014, and as
22 Exhibit 42 is the February 27, 2014 document from
23 Priscilla Whitt to Donna Baker.

24 BY MR. SCHMITT:

25 Q Then let's just continue with marking these

1 documents that you stated that the OSHA Technical
2 Manual and Appendix C were sent to you at the same
3 time on February 25?

4 A Yes.

5 MR. SCHMITT: I will mark the OSHA
6 Technical Manual as Exhibit 43, and the
7 Appendix C ACGIH Threshold Limit Values as
8 Exhibit 44.

9 (Defendant's Exhibits 43 and 44 marked for
10 Identification.)

11 BY MR. SCHMITT:

12 Q Then finally then there was a compilation of
13 communications with Mr. Cox starting with the May 31,
14 2013 email and then some follow up?

15 A There's also this one, that is just to tell
16 me when my deposition was going to be.

17 Q Any other communications, written
18 communications, with Mr. Cox or anyone from his
19 office?

20 A I don't think so, well, just like I think
21 this was like a contract when I first started.

22 Q Okay.

23 A This is where some of the hard copy stuff
24 came but this is still predated so like this should
25 all be on my opinion.

1 I tried to save these different letters. If
2 it's a nice colorful letterhead like that that means
3 it came in the mail and it wasn't an email.

4 Q Okay.

5 A These are three others but they all predated
6 the thing again so I do believe my information is
7 complete.

8 MR. COX: Doug, keep your voice up.

9 THE WITNESS: I'm sorry. Okay.

10 A This one is postdated and that I believe was
11 the opinions which I'm about to give you but I still
12 have other information to share with you.

13 BY MR. SCHMITT:

14 Q Okay.

15 A This is a packet of all the opinions, so my
16 opinion, Fran O'Connor and another railroad expert's
17 opinion.

18 Q Okay. Let me just stop you for just a
19 second. You've handed me plaintiff's rule 26A2
20 disclosures in the Jared Whitt case and you mentioned
21 some opinions from some other individuals?

22 A Well, the people, I can't remember his name.
23 Gaballa?

24 Q Yes.

25 A It was Gaballa, and then those two pages,

1 then that would include O'Connor's opinion, Fran
2 O'Connor, and my opinion is at the end so there's
3 three opinions in here.

4 Q Anything else that you looked at, reviewed
5 or relied on in connection with this case?

6 A I got an expert report from Shea Solutions.

7 Q Dated February 10 of 2014?

8 A Yes.

9 Q Okay.

10 A Then these two items was Jim's office, they
11 had put together like a little overview of some of the
12 microenvironment issues based on different people's
13 thoughts, and then this was kind of like a little flow
14 of the day.

15 Q Okay. So this microenvironment heat index
16 document, it's two pages, and this was prepared by
17 Mr. Cox?

18 A Use this one, this was updated a little
19 more.

20 Q So there were two versions of this document?

21 A Yes.

22 Q One dated February 24, 2014 and one dated
23 February 27, 2014?

24 A Yes.

25 Q Both were sent to you prepared by Mr. Cox or

1 someone at his office?

2 A Yes.

3 MR. SCHMITT: I'm going to mark both of
4 those documents together as Exhibit 45.

5 (Defendant's Exhibit 45 marked for
6 Identification.)

7 BY MR. SCHMITT:

8 Q There is a 14 page document entitled Whitt
9 versus Union Pacific Railroad Company that appears as
10 though it's some type of maybe a medical or a
11 chronology, is that right?

12 A That's the best word.

13 Q That was again prepared by Mr. Cox and sent
14 to you?

15 A These are my only copies of these so we're
16 going to need to make photocopies of some of these.

17 Q That's fine. It's just because for the
18 record we need to make sure we identify what it is
19 that you've reviewed and you've relied on.

20 MR. SCHMITT: So this chronology I'm
21 marking as Exhibit 46.

22 (Defendant's Exhibit 46 marked for
23 Identification.)

24 A I think that's it. Just let me check my
25 computer.

1 MR. COX: Dave, so I'm clear, 45 is
2 microenvironment and 46 is the chron?

3 MR. SCHMITT: Yes.

4 A I think the only thing we have left are
5 these two, let me pull them up for you -- these two
6 pictures were also sent to me to maybe show you
7 equipment that he would be wearing.

8 BY MR. SCHMITT:

9 Q Okay.

10 MR. COX: Voice up, please.

11 THE WITNESS: I'm sorry.

12 A I had received two pictures of Jared wearing
13 head gear, that protective gear that he would be
14 wearing while he was working, one with an example of
15 the face shield up and one with the face shield down.

16 BY MR. SCHMITT:

17 Q When did you receive those two pictures?

18 A Two days ago.

19 MR. SCHMITT: What I would ask, Jim,
20 you're familiar with the two photographs,
21 obviously you provided them to Dr. Casa, could
22 you forward those to me, please?

23 MR. COX: They're coming in in a
24 disclosure.

25 MR. SCHMITT: Okay.

1 A But I think we did well. I think that's
2 what I have.

3 MR. SCHMITT: There are these email or
4 letter communications we'll just mark these all
5 together as Exhibit 47.

6 (Defendant's Exhibit 47 marked for
7 Identification.)

8 MR. SCHMITT: The exhibit sticker will be
9 placed on the first communication of May 31,
10 2013.

11 THE WITNESS: That's what exhibit, Dave?

12 MR. SCHMITT: 47.

13 BY MR. SCHMITT:

14 Q And then the last one being Exhibit 48 which
15 is the contract, what you referred to as the contract
16 when you were retained as an expert in regards to this
17 case, correct?

18 A Yes.

19 MR. SCHMITT: That will be Exhibit 48.

20 (Defendant's Exhibit 48 marked for
21 Identification.)

22 BY MR. SCHMITT:

23 Q Okay. I'll put these documents all back in
24 front of you. Please feel free to refer to any of
25 them throughout your deposition to refresh your memory

1 or otherwise.

2 My question is first of all in, you authored
3 a report which is Exhibit 40, did Exhibit 40 at the
4 time it was authored, November 30, 2013, contain all
5 of your opinions and all reasons and bases for your
6 opinions?

7 A To the best of my ability everything I had
8 received up to that point is included on page one.

9 Q My question though is more specific, did at
10 the time you authored Exhibit 40, did it contain all
11 of your opinions and all of the bases and reasons for
12 your opinions as of that point?

13 A Up to that point, yes.

14 Q My question is since that time, you've now
15 received some additional information and documents
16 that we just discussed?

17 A Yes.

18 Q Have your opinions or any reasons or bases
19 for your opinions changed from what you've stated in
20 your original report dated November 30 of 2013?

21 A Nothing has changed. Some of my thoughts
22 became more solidified with the some of the supportive
23 materials.

24 Q Can you tell me which of your thoughts
25 became more solidified?

1 A Is it okay if I grab my opinion here?

2 Q Yes.

3 A Probably I mean two primary ones: One is I
4 feel more certain now that he definitely suffered an
5 exertional heat stroke; and, second, having to do with
6 the lack of efforts to make modifications related to
7 the work to rest ratios and environmental conditions.

8 Q You said the last one was efforts to change?

9 A To modify the work to rest ratio based on
10 the environmental conditions.

11 Q So of those two items that have now become
12 more solidified which is the term that you used, let's
13 talk about each in turn.

14 What is it that led your opinion to become
15 more solidified that Mr. Whitt suffered an exertional
16 heat stroke based on the information you reviewed?

17 A Do you mind if I take a one second bathroom
18 break?

19 Q Let's take a five minute break.

20 (Recess)

21 MR. SCHMITT: Back on the record.

22 BY MR. SCHMITT:

23 Q Before we broke you were going to tell me
24 that you reviewed some additional documents that made
25 you more certain that Mr. Whitt suffered an exertional

1 heat stroke. What specific additional information did
2 you receive that helped you become more certain in
3 that regard?

4 A The one thing I was kind of lacking up to
5 this point was information on, specific information of
6 how Jared was feeling later the next day or the
7 ensuing days, so -- I just can't remember his name
8 right now so I apologize, let me find the document,
9 here it is.

10 So I had gotten information from Priscilla
11 Whitt and Brandon Peppers that gave a bigger glimpse
12 into Jared's condition on the Friday I guess it was
13 and then the ensuing days after they drove him home
14 and maybe the week after.

15 And it kind of felt more in line now with
16 the information from Wiesen who saw him immediately
17 while he was in the cooling tent and then you keep
18 carrying it back further and it makes a lot more sense
19 that he was suffering exertional heat stroke, there's
20 a lot of consistency.

21 Q So the additional information you're relying
22 on are Exhibits 41 and 42 which were the question and
23 answers that were sent to you by Mr. Cox's office a
24 couple of days ago?

25 A Yes. In fact I had previously thought he

1 had a heat stroke and this, like I said, it was
2 solidified with some of my thought process.

3 Q Okay. What was it specifically about what
4 Mr. Whitt was experiencing during the week or so after
5 the incident that is contained in Exhibits 41 and 42
6 that supports your opinion or that solidifies it?

7 A Someone who suffered heat exhaustion is not
8 struggling the next day and ensuing days after. Heat
9 exhaustion patients recover very quickly. They don't
10 have what we consider like a longer term sequela.

11 So as stated in these pages here Jared was
12 struggling quite a bit for the days after whether it
13 be dizziness --

14 Q That was my next question, what were the
15 sequela that he was suffering from that supports your
16 opinion?

17 A Had gastrointestinal issues where he
18 couldn't really eat much, extreme heat intolerance --

19 Q Intolerance?

20 A Intolerance, yes. Lightheadedness, weakness
21 throughout his whole body, achy, things like that.

22 Q Those sequela will be only be experienced by
23 someone during the days or week after the incident of
24 someone who suffers a heat stroke?

25 A Yes. Someone who suffers heat exhaustion

1 would usually not have these kinds of, one, the
2 length, and, two, the severity, and, three, the array
3 of these kind of responses.

4 Q So someone that suffers heat exhaustion
5 though can suffer some of those sequela?

6 A To give you an example, someone who has heat
7 exhaustion very, assuming after they have heat
8 exhaustion that they're rehydrated and given a chance
9 to rest in almost all cases that person can resume
10 activity the next day.

11 Q So you say almost all so not all --

12 A Heat exhaustion.

13 Q Okay.

14 A I mentioned not all because sometimes if
15 someone, for instance, is not rehydrated at all or is
16 not given a chance to rest they might need a little
17 more time than one day.

18 But they wouldn't still suffer all of these
19 like inability to eat, exercise, heat intolerance, for
20 instance, would never happen in a heat exhaustion
21 case.

22 Q Okay. What else would never happen in a
23 heat exhaustion case out of the sequela that Mr. --

24 A Gastrointestinal issues where I suppose he
25 couldn't have any kind of substantial meals or normal

1 kind of meals. The dizziness.

2 Q Would never occur with someone with heat
3 exhaustion post incident?

4 A Beyond that like first day or so, that's
5 something they might suffer acutely from and maybe for
6 a few hours after.

7 Q When you say first day or so define or so.

8 A Well, I mean, usually the remainder of that
9 day the condition takes place and maybe onto the next
10 day.

11 Q That's the extent that a person that
12 suffered heat exhaustion would experience dizziness?

13 A Yes.

14 Q So a person that would suffer dizziness, for
15 example, in your opinion that continued two, three,
16 four days later would be then indicative of a heat
17 stroke?

18 A Yes.

19 Q Okay.

20 A Especially taken collectively with all of
21 the things he was feeling.

22 Q Any of the other sequela that Mr. Whitt
23 experienced that would only be experienced by someone
24 who suffers a heat stroke?

25 A Not that I recall right at this second right

1 now. The things that I think I also maybe had a
2 better chance to look more closely at Wiesen who I
3 mentioned earlier, his testimony, especially in the, I
4 want to say the one to two hour range after the
5 condition presented itself when he was back at that
6 cooling station when he was noted to be out of it,
7 only using single syllable words, and being extremely
8 exhausted, and having numbness and tingling in his
9 arms and legs, and contractures in his arms and then
10 especially so in his left arm.

11 These things don't happen when someone has
12 heat exhaustion. People who have heat exhaustion can
13 have a completely normal conversation in the couple of
14 hours after a condition presents itself. A heat
15 exhaustion patient is fine ten or 15 minutes after
16 they first start getting treated.

17 They may be really tired but they're not in
18 any way incapacitated from a central nervous system
19 capacity, the ability to process thoughts and
20 communicate.

21 Q And the deposition testimony of Mr. Wiesen,
22 he was one of Mr. Whitt's co-workers?

23 A He was. Wiesen is someone who came into the
24 cooling station in a time frame while Jared was being
25 taken care of there.

1 Q The things that you mentioned that
2 Mr. Wiesen testified that Jared was reporting
3 including numbness and tingling in the legs I think is
4 the one of the items, correct?

5 A Arms and legs.

6 Q Arms and legs. Is numbness and tingling in
7 the arms and legs, is that a sign or symptom of
8 someone who suffers a heat stroke?

9 A Yes. Heat stroke is a very unique condition
10 that you can have many different signs and symptoms
11 because when someone is overheated different parts of
12 the body could be affected by the hyperthermia.

13 So for some people it could the liver is
14 affected, some the kidneys, some the muscles, some the
15 nervous system, some the brain, some the heart.

16 So it can be multifaceted and so, you know,
17 in this particular case we'd see like his GI system
18 was affected so you have stomach and intestines. His
19 central nervous system was affected from the
20 perspective of heat intolerance which is regulated by
21 the hypothalamus. Could be the dizziness which could
22 have been some vestibular issues there. His extreme
23 weakness, like you don't know if there might have been
24 some muscular issues, for instance, rhabdo, which is a
25 fancy term, but it's r-h-a-b-d-o, it has a longer back

1 part of it, which we don't have to worry about right
2 now.

3 Those are examples of some of the parts of
4 Jared that might have been influenced by the
5 hyperthermia.

6 Q Continuing with just then the source of the
7 information to support your opinion that he suffered
8 the exertional heat stroke, have you reviewed any of
9 the deposition testimony of the other various
10 co-workers that were also present including
11 immediately after the scene or after the incident when
12 Mr. Whitt was found sitting on the ground?

13 A Yes, yes, that's where it all is very
14 consistent. So the ones I think would be most
15 relevant would be David Birt and Joe Linford.

16 So the Birt and Linford, the Wiesen one that
17 was mentioned earlier, and then the contributions from
18 Priscilla Whitt and Brandon Peppers forms a very
19 consistent story that this was an exertional heat
20 stroke from time of incident to, you know, the week
21 after the incident.

22 Q Is it significant to you that multiple
23 co-workers, in fact, I think virtually everybody
24 except perhaps Mr. Wiesen making some inferential
25 allusion to it but have all testified that from their

1 personal observations Mr. Whitt was not disoriented or
2 confused. Was that significant in your own opinions?

3 A I didn't get that impression from Joe
4 Linford. Jared communicated to Joe that he was out of
5 it and that he was not doing well and Linford made
6 such an extraordinary effort to lower him down to the
7 ground so that he was protected just in case maybe he
8 fainted.

9 And in Jared's own testimony he says how he,
10 I don't know if he used the word goofy or he was out
11 of it, that there might have been a stretch of time
12 from when they helped to carry him when he was down
13 into the truck, that there might have been ten or 15
14 minutes that he doesn't really recall.

15 Q Do you consider it significant that other
16 witnesses have testified that specifically from their
17 personal observations of Mr. Whitt that he was not
18 confused, that he was coherent, conversant?

19 A I didn't get that impression from Birt or
20 Linford that he was his normal self at this point from
21 a cognitive perspective.

22 Q Are you aware that other witnesses have, and
23 if you're not that's fine, but are you aware whether
24 or not other witnesses have testified that from their
25 personal observations Mr. Whitt was not confused?

1 MR. COX: Objection to form and
2 foundation.

3 A There may have been people that said that.
4 I'm not sure if they had enough contact with him to
5 really get a good sense of that.

6 BY MR. SCHMITT:

7 Q So you don't know what contact they had if
8 you're not familiar --

9 A Well, the people that I feel had a lot of
10 contact with him being Birt and Linford and Wiesen who
11 actually spent significant time with him had enough
12 worry, I mean, you think of Birt, the second he is
13 working with him he has enough concern that he wants
14 to drive him to hospital.

15 Q What did Mr. Birt testify to as to why he
16 wanted to take --

17 A I think his two biggest concerns were that
18 he was suffering a heart illness and that he may have
19 some prodromal, signs and symptoms of potentially
20 having a heart attack or a heart issue because he had
21 reported numbness and tingling in his extremities
22 especially his left arm.

23 So he, Birt is gathering this information
24 together, here is a guy who is laying down in the
25 heat, is getting assisted to a vehicle after, you

1 know, being in the heat and then is in this vehicle
2 and then communicating that he has numbness and
3 tingling.

4 So he, Birt had said that he thought heart
5 might be connected or a result of a heart stroke and he
6 was deathly concerned about the heart issue because
7 that's I think was the big impetus of why he wanted to
8 get him to a hospital but he thought it might have
9 been related to a heart issue.

10 Q That is your recollection of what Mr. Birt
11 had testified to?

12 A Yes.

13 Q Is someone that's experiencing numbness or
14 tingling on just one side of their body, in other
15 words, just the left upper extremity as compared with
16 both extremities, is that significant in determining
17 whether or not a patient suffered a heart stroke or --

18 A There's definitely a little bit more of a
19 concern of a potential heart attack when someone tells
20 you they have like unilateral numbness and tingling
21 down their left arm, that's kind of a red flag.

22 But Jared supposedly said he had numbness
23 and tingling in his legs and arms, so I don't know the
24 extent that he really focused just on his left arm.

25 And, I mean, he was, it was clear he was

1 dizzy, light headed, you know, weak, great fatigue.

2 And, you know, like I said, Joe was so concerned,
3 first he saw him laying down, asked him to sit up,
4 then he tells him, Jared tells him he's not doing well
5 and Joe lowers him back down to the ground.

6 So those are all pretty big indications that
7 Jared was in a pretty serious situation, and then they
8 assist him to the car and they put him in the truck
9 and then the person who is driving the truck thinks
10 that this is serious enough that I'm heading to the
11 hospital.

12 Q If someone is suffering a heat stroke would
13 you expect that they are confused?

14 A Yes, or what we usually say is there's some
15 kind of altered CNS function, CNS stands for central
16 nervous system function.

17 Someone could be completely unconscious,
18 they could have confusion, they could have, you know,
19 just inability to act normally, they might be slow to
20 respond, agitated, aggressive, I mean, those are just
21 some outward signs and symptoms you might see.

22 Q Let me do this, well, before I continue with
23 that, and so the testimony that you're relying on then
24 is from Birt, Wiesen and Linford as you've just
25 identified?

1 A And Whitt.

2 Q And Mr. Whitt himself?

3 A Yes.

4 Q Do you consider any of the testimony from
5 any of the other co-workers and individuals who were
6 present at the time of Mr. Whitt regarding their
7 observations of his condition to be important or
8 significant?

9 A I don't want to discredit any of them, I'm
10 just targeting some right now. I mean, I think
11 Steely, I think he encouraged Jared to go to the
12 hospital that evening after I think he might have had
13 a phone call with him after he was back at the hotel,
14 so he might have sensed something that was important
15 and serious.

16 Q But you don't know?

17 A No, I am just saying he did encourage him to
18 go to the hospital, so he might have been putting all
19 together what he saw that day and if he was still
20 struggling at that moment he was, you know, being
21 supportive of him going to the hospital, that's what
22 Steely testified.

23 Q Okay. Anyone else? Anything else
24 significant?

25 A Nothing that sticks out at this exact

1 moment, those are some of the strong ones.

2 Q All right. I'd like to make a list of,
3 first of all, heat stroke and if we can go through
4 those, what are the signs and symptoms, we have
5 touched on some of them, but let's get a working list
6 that we can then work off of. What are the signs and
7 symptoms of a heat stroke?

8 A Well, the two key diagnostic criteria for a
9 heat stroke that separates it conclusively from other
10 conditions is, one, extreme hyperthermia at the time
11 of collapse.

12 Q What is that, extreme hyperthermia?

13 A Like the exact temperature, usually like 105
14 or greater, maybe 104 or greater depending on --

15 Q In the internal body temperature?

16 A Yes.

17 Q Okay.

18 A So we lost the ability to have an accurate
19 assessment here when they decided not bring him to the
20 hospital so we lost one of our key diagnostic
21 criteria, we don't have access to this data, because
22 obviously they didn't do rectal temperature at the
23 cooling station nor did any of his co-workers do it at
24 the time of his collapse.

25 Just as an example, in the military athletic

1 situations a rectal temperature would be obtained
2 within a minute or two at the time of collapse.

3 Second --

4 Q All that would do is it would just be a
5 diagnostic tool, it's not a treatment tool?

6 A No, I mean, it allows you immediately to
7 move in that direction that you realize it's a heat
8 stroke because there were other reasons why someone --
9 the second one I'm going to tell is CNS dysfunction.
10 So the temperature helps you because there are other
11 reasons why someone could have CNS dysfunction.

12 So if someone is like unconscious in front
13 of you but they're not hyperthermic you're starting to
14 think now about maybe a head injury or, you know, a
15 hypoglycemia issue so the temperature really helps
16 trigger you right towards the proper treatment method.

17 So CNS dysfunction, I kind of went through
18 that already, that could have a myriad of
19 presentations. In its most severe form it might be
20 just someone in a coma.

21 I've personally treated 167 heat strokes and
22 more than half of them are conscious and lucid at the
23 time of collapse, but then that could dramatically
24 change in a matter of minutes, that lucidity. So
25 someone might not be able to communicate with you

1 anymore, they might have an altered consciousness,
2 they might get agitated or aggressive.

3 As he said like, in Jared's testimony like
4 he thought he was like spacey or goofy, or obviously
5 Wiesen's testimony later on which really starts to see
6 the effect of now some time passing with the
7 hyperthermia, that he was just not, clearly not the
8 normal Jared Whitt for that time frame that he was in
9 that cooling station.

10 Q So the two diagnostic criteria, the extreme
11 hyperthermia, and number two, the CNS dysfunction, and
12 the CNS dysfunction consists of, it could be coma,
13 confusion, what else do you conclude in CNS
14 dysfunction?

15 A Altered consciousness.

16 Q Okay. Define altered consciousness.

17 A Someone who's not fully aware so they're not
18 maybe giving either proper answers or they say
19 inappropriate things or they may be just in and out of
20 it, they may be kind of a little bit responsive for a
21 little while and then a couple of minutes they're not
22 responsive.

23 Q What else is included in the CNS
24 dysfunction?

25 A As I said agitation or aggression, some

1 people punch and scream and bite. Some people are
2 easily annoyed.

3 The biggest thing with a person who is
4 having heat stroke compared to heat exhaustion is heat
5 exhaustion people get better in the ten, 15, 20
6 minutes after the condition presents itself and
7 someone either, you know, stops exercising, they get
8 them to the shade and they start cooling down, where
9 heat stroke people get worse as time pursues and he
10 clearly was not getting better in any time frame after
11 that. So that's why it's really, really interesting
12 that at the cooling station that he's just not doing
13 well.

14 Q That's the primary criteria to distinguish
15 between heat stroke and heat exhaustion is that heat
16 exhaustion people will get better in 15 to 20 minutes
17 following the episode?

18 A Well, in addition to the items I mentioned,
19 I mean, obviously if you have the body temperature
20 measurement, a heat exhaustion person would typically
21 be 102 to 105 at the time of collapse and a heat
22 stroke person would typically be, you know, the most
23 common starting heat stroke temperatures are like in
24 the 105 to the 110 range.

25 Q All right. So heat exhaustion, we're making

1 a list -- well, strike that.

2 Before we get to the heat exhaustion, heat
3 stroke, did you give me then the entire list?

4 A Those are the key diagnostic criteria.
5 There are a list of signs and symptoms. The problem
6 with the --

7 Q All right. We'll get to those in a minute.
8 I like your approach, let's talk about the diagnostic
9 criteria. So heat exhaustion, we were starting to
10 develop a list, one of them being, number one, that
11 the internal body temperature is in the range of 102
12 to 105 degrees?

13 A Yes.

14 Q Are there additional diagnostic criteria for
15 that list?

16 A Yes, I mean, by definition heat exhaustion
17 is the inability to continue exercise in the heat.

18 Q Then what does that mean, the inability to
19 continue exercise in the heat?

20 A Usually there's, you're connecting it with
21 some kind of cardiovascular insufficiency meaning that
22 the person's heart can't continue to sustain --

23 There's three things the heart is being
24 pressured to do: One, sustain the muscular activity
25 of doing the exercise; two, getting blood to the skin

1 surface area so that you continue to cool yourself;
2 and, three, to maintain blood pressure.

3 So it's challenged at this point because the
4 muscle is asking for a lot of blood, the skin is
5 asking for a lot of blood to cool itself, but you're
6 also usually dehydrated at this time so there's less
7 of a reservoir of fluid.

8 So the body, you know, can't keep up, you
9 can't continue to exercise in the heat. So that's why
10 people will usually stop and that's why they usually
11 rapidly recover because you can get fluids back in the
12 person.

13 The muscular activity stopping is one of the
14 big things that allows a heat exhaustion person to
15 recover because now the muscle is not demanding any
16 more blood flow like it was during exercise.

17 Q And so the recovery issue is important in
18 determining the difference between --

19 A Yes.

20 Q -- the diagnosis between heat exhaustion and
21 heat stroke?

22 A Yes.

23 Q When we talk about the recovery, Doctor, you
24 said that heat exhaustion will get better in 15 to 20
25 minutes whereas heat stroke, that person will get

1 worse over time?

2 A Yes.

3 Q Can you describe for me in what manner that
4 a heat stroke victim will get worse over time?

5 A Sure. It's the cognitive side of things can
6 get worse, for instance, a good example is Wiesen, he
7 said, I think he said he was there with him for 60 to
8 90 minutes and he was completely not normal for that
9 60 to 90 minutes.

10 Q But did, all right, and that was Mr. Wiesen?

11 A Yes.

12 Q Did Mr. Whitt get better though following
13 that 60 to 90 minutes cognitively?

14 A Maybe marginally but he seemed like he was
15 extremely fatigued and still slow to respond even when
16 they got him back to the hotel which prompted, I guess
17 it was Wiesen who drove him back and then prompted
18 them to I think make phone calls and get him to the
19 hospital.

20 Q Okay. So cognitively gets worse, what else
21 in the recovery issue?

22 A Well, it seems like while he was in the
23 cooling station the numbness and tingling were not
24 doing well at all --

25 Q Were they getting worse?

1 A -- lightheaded or it was at least sustained.
2 That's one of the big things you have to understand
3 with heat stroke is often things will, maybe one might
4 not get worse but they're not getting better.

5 And there's a few things to understand,
6 people who are rapidly cooled following a heat stroke
7 they recover a lot faster and a lot of these issues
8 are not problems anymore.

9 So as an example like with a lot of heat
10 strokes I've cared for, two, three, four hours after a
11 heat stroke these people often can, will walk on their
12 own and will, can leave really well with their family
13 or with friends.

14 And they are might be exhausted in terms of
15 just like, I don't want to go exercise right now, a
16 lot of fatigue, but they still, they can go home and
17 make themselves dinner and they can watch TV and they
18 can go to sleep and have a normal night's sleep and
19 things like that.

20 When a heat stroke victim is not
21 aggressively cooled that's when you enter this channel
22 of events like he fell into where, you know, eating
23 didn't go well that next day, or ensuing days, sleep
24 didn't go well, his ability to be out in the heat
25 didn't go well. These are very common things that

1 happen for people who have a heat stroke that was not
2 cared for properly.

3 Q What were the circumstances that you
4 treated, I wrote down you said 167 heat stroke victims
5 in your career, why were you treating those
6 individuals?

7 A A lot of different situations. I have been
8 on the medical team of a lot of different situations
9 where heat strokes take place. So I've been at road
10 races, I have been in football players, soccer
11 players.

12 Q So sporting events?

13 A Those were all sporting events. I've
14 consulted a lot with military heat strokes but not on
15 site specifically for the care of those.

16 Q So you yourself personally treating heat
17 stroke victims were in connection as part of a medical
18 team with road races and sporting events in your
19 career?

20 A Yes.

21 Q I guess we didn't talk about your
22 educational background but let me just confirm this.
23 First all you are a doctor, it's a doctor of
24 philosophy, Ph.D.?

25 A Yes.

1 Q All right. You are not a medical doctor?

2 A That is correct.

3 Q All right. So you're personally never
4 practiced emergency room medicine, for example?

5 A I have not.

6 Q Or practiced any type of medicine obviously
7 in any specialty?

8 A Well, just to clarify because I'm not sure
9 if the jury will fully understand, their level of
10 understanding regarding athletic training, I'm a
11 licensed athletic trainer in the state of Connecticut.

12 Q What does that mean?

13 A So an athletic trainer is a medical
14 professional that prevents, recognizes and treats
15 medical conditions to the physically active people.
16 So athletic trainers work in sports settings and
17 military settings and industrial settings.

18 Q You said prevent?

19 A Recognize and treat.

20 Q Okay.

21 A Injuries related to the physically active.
22 So that's the medical credential that allows me to
23 work in these situations.

24 Q And this licensed athletic trainer status,
25 that's a license issued by the state of Connecticut?

1 A Yes.

2 Q What are the criteria to receive that
3 license?

4 A You have to graduate from an accredited
5 athletic training program and you have to pass a
6 national standardized test, you know, board
7 certification, similar to any other medical credential
8 like a nurse or a PA or things like that.

9 Q Of course becoming a PA is a fairly
10 extensive educational regimen?

11 A Same as athletic training, there's no
12 difference.

13 Q Tell me the graduating from the accredited
14 training program, for example, how many credit hours?

15 A Sure. There's typically about 20 athletic
16 training classes you need, so some programs will do it
17 within a master's degree or some programs might make
18 it a fourth or fifth year in an undergrad program so
19 it's, it just depends on the school that you choose.
20 Some people will get their bachelor's first and then
21 do athletic training in graduate studies and some
22 people will do it as part of a bachelor's program.

23 Q So there's 20 classes, how many credits
24 roughly?

25 A About 60 credits that are specific to

1 athletic training.

2 Q So, for example, someone that has a
3 bachelor's degree in --

4 A Economics.

5 Q Perfect. Just give me some sense then
6 because I'm not familiar with such licensing, how
7 much, somebody that has a bachelor's degree in
8 economics and they now want to be a licensed athletic
9 trainer, it would be require roughly 60 credits every
10 two --

11 A To give you an idea, most bachelor's
12 programs across America no matter what the field it
13 takes about 120 to 130 credits to graduate from any
14 college in America.

15 About 60 of those are your general education
16 things to first, usually first two years of college
17 and then usually you're at about 60 credits or so for
18 whatever major you chose.

19 So like, for example, here at the University
20 of Connecticut like that would be similar to the
21 amount of credits you would need to become a nurse or
22 like an occupational therapist or other medical
23 credentials like that.

24 Physician assistants still in our country,
25 you know, you can be a bachelor's degree and get a PA

1 but I know like in 2020 they're moving toward
2 requiring a grad degree.

3 Similar to athletic training I think our
4 year is going to be 2025 --

5 THE COURT REPORTER: Could you slow down
6 a little bit.

7 THE WITNESS: Sorry.

8 A I think it's 2025 athletic training will
9 require a grad degree so, and PT just made that move
10 as well, like they have a date out there that requires
11 a grad degree instead of just an undergrad degree.

12 So the medical professions are often now
13 moving towards the entry level degree becoming a
14 graduate degree.

15 BY MR. SCHMITT:

16 Q Okay.

17 A Is that helpful?

18 Q It is.

19 A Okay.

20 Q We were then going through the list of then
21 the recovery issues on patients who suffer heat stroke
22 versus heat exhaustion. You had indicated numbness
23 and tingling, that that will continue for someone with
24 a stroke --

25 A It could, like I said some heat stroke

1 victims might have not at all and some might have
2 that.

3 Q Let me ask you on that point, is it
4 significant, let's just assume hypothetically that you
5 have a patient or an individual that's only suffering
6 numbness and tingling in one extremity versus both
7 upper extremities, is that consistent or inconsistent
8 with someone that suffered a heat related illness?

9 A It's really hard to say. I mean, Jared had
10 reported that he felt numbness and tingling in his
11 both legs and both arms and then even at the cooling
12 station later he felt it in both arms and then it
13 really continued specifically in his left arm.

14 But heat stroke is such a random, in terms
15 of what the responses you see, there's no consistency
16 to it because when you overheat the body there's
17 something what we call the critical threshold for cell
18 damage, it's probably somewhere around 105.5 degrees
19 Fahrenheit. When you get over that zone the human
20 body thankfully has about 30 minutes that it can
21 tolerate without any complications.

22 Now, that's a huge benefit from an
23 evolutionary perspective because in the past getting
24 above that temperature was something that we did, for
25 instance, when we were hunting because we could get

1 hot for a short period of time and then there was no
2 damage, no long term consequence which is a powerful
3 tool for us. We could have, you know, extreme
4 exercise for a short period of time.

5 But when you're over that temp for about 30
6 minutes you tend to start having long term issues. So
7 just to give you an example, when you have a heat
8 stroke victim if you keep that window that they're
9 over 105 to less than 30 minutes we have evidence in
10 over 2,300 cases of heat stroke that they recover
11 completely, no issues.

12 Q Out of how many?

13 A All of them, 2,300 like out of 2,300. If
14 you can get someone's temp under 105, this is just
15 even outside the landscape of this, this is how we
16 save people's lives, you know, who are football
17 players and soldiers, this is the key to saving lives
18 from heat stroke.

19 And, you know, the people who are employing
20 you, anytime you have recommendations the key thing is
21 getting the temp down as fast as possible if someone
22 has heat stroke because we know that from military and
23 athletic data that no one has died if their temp
24 stays, if it's under 30 minutes.

25 Then in the 30 to 60 minute window there's a

1 chance of death, not likely, but there's a likelihood
2 that there's going to be some kind of long term
3 issues. So as examples, it might be someone needs
4 kidney dialysis either temporarily or permanently or a
5 kidney transplant, they might have liver issues, they
6 might have muscular issues.

7 But two of the most common issues are heat
8 intolerance meaning they struggle to exercise in the
9 heat; or cognitive issues, that's a very common thing
10 that I get from former military soldiers that they
11 can't function at the level they did before. So
12 that's the 30 to 60 minutes window.

13 When you're over 105 for greater than 60
14 minutes the likelihood of someone dying is greater and
15 if they do survive it becomes much more likely that
16 there's going to be something that, you know, lingers
17 with them beyond just the acute condition.

18 Q What would you expect that would linger?

19 A Heat intolerance and cognitive issues are
20 two of the biggest things, kidney issues are also very
21 common. But it's a mixed bag, someone might just have
22 heat intolerance but be cognitive completely fine.

23 So in this particular case I think he had a
24 what you might call a mild heat stroke where he had a
25 temperature thankfully that wasn't 108 or nine or ten,

1 I have seen heat stroke at 112.

2 So he might have had something that was in
3 the 105, 106 range and thankfully, you know, you might
4 just be in an air conditioned truck and get to the
5 cooling station, he might not have been above that key
6 temperature for very long.

7 So thankfully Jared didn't die and
8 thankfully it looks like he might not have issues
9 that's he's going to carry forward maybe for his whole
10 life. So those are really good news items.

11 So my guess is from everything, you know,
12 looking at what you're seeing is he probably was in
13 that 30 to 60 window of being hyperthermic, because of
14 these things that you see that people are telling you,
15 for instance, the cooling station, you know, he's
16 there up to a couple of hours after.

17 The heat stroke victims who cool rapidly,
18 they're not like that two hours later. These are
19 people who have normal conversations, they tell me
20 their race, they tell me about the practice they were
21 just doing. And they're tired, but they're just, you
22 know, kind of just tired the way you would feel after
23 an exhaustive bout of exercise but they're still fine,
24 you can look them in the eyes and they seem fine and
25 they can talk to you normally.

1 But these things now, these ensuing things
2 that are happening in the following days and week it
3 tells you that this is clearly not a heat exhaustion
4 but also Jared got a little lucky that, you know, it
5 wasn't an extreme heat stroke.

6 I mean, there was some things that were done
7 well in this situation. Those would include that once
8 Linford saw him, the second he saw him he realized
9 that something was wrong with his co-worker, that we
10 don't know how long Jared was there, we don't if other
11 co-workers could have helped but Joe noticed
12 something.

13 And then once he got him in the car his
14 colleague, Birt, he thought that this was something
15 above, I don't know how much he was experienced but he
16 said this is something that isn't typical, I'm going
17 to get this guy to the hospital.

18 Even when they got him back to the cooling
19 station, not optimal in any stretch of the
20 imagination, but they have him in air conditioning,
21 they're thinking of hydrating him, they're thinking of
22 potentially, you know, using ice, these are not the
23 best cooling modalities but they all work, they had
24 the best interest of Jared. So they all hopefully
25 took him from that mild heat stroke into a safety zone

1 where maybe, obviously he didn't die and hopefully he
2 might not have life long consequences of the
3 condition.

4 Q I wrote down that you indicated that you
5 believe Jared suffered a mild heat stroke?

6 A That would be my guess, yes, just, it needs
7 to be fair because it's something I would certainly
8 tell jurors, we lost, a lot of our ability to
9 accurately diagnose this was lost when he didn't go to
10 the hospital.

11 So we have to make some assumptions that
12 normally you would never have to make theses
13 assumptions because if Birt had continued to the
14 hospital they would have had a core temperature and
15 they would have had a much better sense of, a medical
16 sense and a medical assessment of cognitive function,
17 that all the people who either transported him or
18 cared for him at the cooling station, there was no
19 people who had medical credentials.

20 Q So diagnostic evidence that would have been
21 available had he had gone to the hospital would have
22 been, number one, core temperature; number two,
23 cognitive function evaluation by a medical doctor?

24 A A medical professional.

25 Q Anything else?

1 A No. Like I mentioned to you before a couple
2 of the key diagnostic criteria are hyperthermia and
3 cognitive function, and we really lost our ability to
4 acutely assess those by people who are trained to
5 assess those things.

6 Q Is an individual's vital signs or lab
7 results, are those important diagnostic criteria to
8 determine whether or not an individual suffered a heat
9 stroke?

10 A Absolutely, they're very important. But in
11 this particular case I'm guesstimating a little bit
12 but it was probably four-and-a-half to five-and-a-half
13 hours later that you first start getting those vital
14 signs or lab tests assessed by medical professionals.

15 Q So meaning when Mr. Whitt went to the
16 hospital later that evening --

17 A It would be make total sense that his
18 temperature would be back down near normal since all
19 that time had passed.

20 Q What are the vital signs and lab results
21 that you would look at in determining whether or not a
22 patient suffers a heat stroke?

23 A That's a good question. So a lot of people
24 will have blood pressure issues, sustained, meaning
25 like the systolis might be low later on; they might

1 still have a high heart rate meaning the pulse still
2 might be up in 140s, 50s and 60s for people who are
3 still stressed; they might still have a high
4 respiratory rate so a, you know, resting might be ten
5 or 12 and they might still be in high teens; the
6 fourth vital sign would be body temperature, obviously
7 harder to tell a little later on; fifth, some people
8 use Pulsox, probably at that point that wouldn't be
9 very revealing.

10 From the lab tests some of the things that a
11 lot of people will look at are like liver, people
12 would look at liver enzymes as an example, markers of
13 muscle function or that rhabdo that I mentioned to you
14 earlier, those might be also done, people might look
15 at someone's hydration status. Those start to tell a
16 little bit of a story. Thankfully in this case as I
17 mentioned to you already we did not see elevated liver
18 enzymes.

19 Q Okay. Those were normal at the time Mr.
20 Whitt was seen in the hospital?

21 A Yes. I would have to check the time but I'm
22 going to guess somewhere in the ten to 12 range that
23 night.

24 Q So the fact that they were, in which you
25 thought guesstimating four-and-a-half, five-and-a-half

1 hours post incident?

2 A So a few things you have to consider here,
3 one is that encouraging that his liver enzymes were
4 not elevated at that point, they can be elevated in
5 that short period of time. It tells us again what I
6 told you would probably support my theory of the mild
7 heat stroke situation.

8 But to be really honest people's liver
9 enzymes, they spike 12, 18, 24 hours later so they
10 don't always give you the most robust response in
11 those few hours later.

12 Q But of course it's an important criteria
13 given the fact that obviously the hospital drew it and
14 took a look?

15 A No question. And often they will draw it to
16 serve as a comparison because they often will not
17 expect to see an evaluated level right then but then
18 if he's not doing well and they do it again the next
19 morning and see the spike and now they're really
20 thinking this is a serious heat stroke that's starting
21 to take a turn for the worse and we have to think
22 about how we can help the liver regain normal
23 function. So a lot of times they use that as a
24 baseline measure.

25 Q Are you aware of any abnormal liver enzyme

1 test results for Mr. Whitt?

2 A I don't think so. But from my records I
3 don't remember him getting any other testing beyond
4 that Thursday evening, like, I mean, acutely, like he
5 might have had stuff weeks later.

6 So all of this points in the same direction
7 that you thankfully have a person who when he
8 collapsed it was probably in the 105 to 106 range.

9 Q So going through the lab results, liver
10 enzymes which in this case Mr. Whitt's were normal
11 which then could be indicative and support a finding
12 that he did not suffer heat stroke, agreed?

13 A Yes, I mean, I don't think you could ever
14 rule out a heat stroke based on liver enzymes that are
15 four or five hours -- perhaps I didn't clarify one
16 thing.

17 Some people could have heat stroke and not
18 have elevated liver enzymes. Liver is one organ that
19 doesn't have to be affected from a heat stroke. Okay.
20 That is one thing that is often affected.

21 But like I mentioned to you before for some
22 people it might be their muscles and their kidneys and
23 that might be it.

24 Q So it's a variety of criteria?

25 A Yes.

1 Q But do you agree with me though then that at
2 least this one particular criteria, liver enzymes, the
3 fact that those were normal would be indicative or
4 support, just by itself in isolation would support a
5 finding that Mr. Whitt did not suffer a heat stroke?

6 A Not the readings from four or five hours
7 later. If you tell me the morning after readings that
8 they were absolutely normal then we would know one of
9 two things, or three things, that it wasn't an extreme
10 heat stroke or his liver wasn't affected by the heat
11 stroke or he didn't suffer heat stroke.

12 But four or five hours after the condition
13 that is not, that would not be the time you would ever
14 expect to see the peak of those measurements.

15 When someone has a legit, like very serious
16 heat stroke, I'm talking about like people who are 108
17 to 110 who not cooled, I mean, these things, I mean,
18 they will spike for two, three days out before you
19 start to see it come down.

20 Q So someone that suffers a heat stroke will
21 never have liver enzymes being elevated within the
22 four to five hours --

23 A I don't want to say that, they could.

24 Q Okay.

25 A But I think most physicians who do the

1 measure there, like I said it's usually serving as a
2 baseline for the next measure that they're going to be
3 getting.

4 Q All right. So it may serve as a baseline,
5 I'm just trying to understand then what's the purpose
6 in doing them that evening, they're normal, is that
7 consistent or inconsistent with someone that suffered
8 --

9 A Well, there's two reason to do it that
10 evening. One is if they're already elevated that's
11 telling.

12 Q If they're elevated it's telling you that
13 they had a heat stroke?

14 A Yes, it could be a heat stroke.

15 Q Right.

16 A And second, it serves as the baseline
17 because if you see somewhat normal readings right then
18 and then it spikes the next morning you know that the
19 liver is now being affected by the number of minutes
20 that it was hyperthermic. So --

21 Q This -- what were you going to say?

22 A I was just going to say we often use the
23 term like a heat stroke sometimes uncovers the weak
24 link organs in our body, where you could have a heat
25 stroke and the kidney is not affected at all but the

1 muscle is affected or nothing is affected but only the
2 brain is affected.

3 So like it's just, we don't know, we don't
4 have the understanding yet of why these number of
5 minutes that they're hyperthermic that seems to affect
6 certain organs.

7 Now, some people have multi-organ failure
8 and that's very tightly related to the number of
9 minutes a person is hyperthermic.

10 Q The second lab result issue you said was the
11 marker of muscle function which was this --

12 A Rhabdo.

13 Q Rhabdo?

14 A The real full name of that is
15 rhabdomyolysis.

16 Q Did they do that test for Mr. Whitt?

17 A I believe they did like often you'll do
18 things like test the myoglobin levels, I am actually
19 not positive if they did those, actually I would have
20 to check, I'm assuming they did and I'm assuming that
21 there was nothing extreme right then.

22 But once again these things often peak in
23 the 12 to 24 hour window after someone has a heat
24 stroke.

25 Q If that test were performed and if they were

1 found to be normal at least at the time that they were
2 done, would that be consistent or inconsistent with
3 someone that suffered a heat stroke?

4 A Well, I think we're back to the same thing
5 again. If they, if it was not elevated it's probably
6 telling us one of three things: That organ wasn't
7 affected by the heat stroke; or they didn't have the
8 heat stroke; or not enough time has passed yet to show
9 the results from that test.

10 Q Okay. The third item of the lab results was
11 an analysis of the urine hydration status?

12 A Yes.

13 Q Was Mr. Whitt evaluated in that respect?

14 A Yes. They evaluated him and I guess he was
15 still thought to be dehydrated and I believe they gave
16 him about two liters of fluid in that few hour stretch
17 he was there.

18 Q So was the finding Mr. Whitt had, was that
19 consistent or inconsistent with a heat stroke or
20 something else?

21 A Dehydration is often present with heat
22 stroke.

23 Q Is it also present with heat exhaustion?

24 A Yes.

25 Q Okay.

1 A People who are suffering from heat
2 illnesses, the great percentage of the time they're
3 dehydrated.

4 Q Okay. So it would be indicative of a heat
5 illness in general, it may also be heat stroke, but it
6 could be some other lesser form of --

7 A In terms of what happened that day, that he
8 definitely suffered a heat illness and, you know,
9 dehydration can be, you know, related to any of the
10 heat illnesses but it certainly makes sense for
11 someone who, you know, was active all day in the heat.

12 Q Any other lab results that you are testing
13 that you want to perform to assist in the diagnosis of
14 someone as to whether they suffered a heat stroke that
15 we haven't talked about?

16 A I mean, people would typically do, like they
17 may do cognitive batteries, like on some kind of
18 cognitive test.

19 I think it would matter the extent of what
20 they're being presented with, they wouldn't usually do
21 it like right at that moment in the four hour mark,
22 that might be something they do like a few days later
23 especially if they're concerned that person is not
24 what they think getting back to normal.

25 Q Were there any cognitive tests performed on

1 Mr. Whitt that night?

2 A I don't believe so.

3 Q Okay. Anything else that we haven't talked
4 about?

5 A I don't think so. I mean, I don't know if
6 you want to follow up now because you did diagnostic
7 criteria, do you want to do signs and symptoms?

8 Q I do.

9 A Okay.

10 Q So what are the signs and symptoms first of
11 all of a --

12 A This is the really important part in terms
13 of education especially for co-workers and people who
14 maybe are not medically trained.

15 The signs and symptoms of heat exhaustion
16 and heat stroke completely overlap each other. So as
17 an example nausea and vomiting, headache, dizziness,
18 dehydration, extreme fatigue, malaise, I could go on
19 but that gives you a little bit of a start. But all
20 of those can be present with heat exhaustion and heat
21 stroke.

22 So the rule of thumb always is if you're not
23 sure which of the two conditions it is always assume
24 the worst until proven otherwise because a heat
25 exhaustion person can never die and never have any

1 long term complications from their condition. A heat
2 stroke can die or have long term complications. And a
3 heat exhaustion person would never, never suffer from
4 being aggressively cooled.

5 So the course of action that's optimal for
6 heat stroke would never harm the heat exhaustion
7 person. So you're always better off assuming the
8 worst. And I like David Birt's perspective of let's
9 get him to the hospital as fast as possible because
10 that's where the medical professionals are.

11 If you told me there was an MD or an
12 athletic trainer at the cooling station I honestly
13 would never have gone to the hospital, I would have
14 want the medical professionals test him as fast as
15 possible.

16 We have, just to show how important it is to
17 get their temp down to get the medical professionals,
18 the current advice in the military and in athletics
19 that we're trying to get the industrial world to also
20 adapt is the concept of is cool first, transport
21 second if medical professionals are available.

22 Cool first, transport second, that is if
23 medical professionals are available because we don't
24 want to lose the time, it's reiterating the concept
25 that we have a 30 minute window and we want to take

1 advantage of that window.

2 Q Okay.

3 A In this case, you know, David said he pulled
4 off the road when his supervisor called him, and I
5 don't know if he pulled off the road for the whole
6 eight minutes of that call, but that gives you an
7 example of like that's valuable time lost.

8 And then they decide to bring him back and
9 then for some period of time he ends up staying in the
10 truck and then goes into this cooling station and all
11 of it is not optimal ways of cooling so our minutes,
12 our clock is ticking and we're losing valuable time
13 and that's why we, you know, always assume the worst,
14 assume it's a heat stroke until proven otherwise.

15 And given the circumstances I think, you
16 know, you would always want these co-workers to think,
17 you know, this may be a heat stroke, let's get him
18 cared for quickly.

19 Q Do you believe that telephone call was eight
20 minutes long?

21 A I was told it was eight minutes long so I'm
22 just --

23 Q Who told you that, Mr. Cox?

24 A It was in this, I can find it for you, in
25 the chronological stuff.

1 MR. COX: Keep your voice up.

2 THE WITNESS: Sorry.

3 A Here it is, got it.

4 This says here, phone records, Thomas
5 Dalebout called Dave Birt and the call lasted eight
6 minutes.

7 BY MR. SCHMITT:

8 Q That's Exhibit?

9 A I'm sorry, Exhibit 46.

10 Q Page?

11 A Page four.

12 MR. COX: David, so you'll know, those
13 are from the phone records that you sent me.

14 BY MR. SCHMITT:

15 Q All right. So you were indicating that then
16 if there's a medical professional on site don't
17 transport, treat him right there, cool first,
18 transport second?

19 A Just with the caveat, if you have an
20 appropriate cooling modality like cold water immersion
21 or being able to have like a shower from a cold locker
22 room shower like where you can douse completely the
23 whole body with cold water.

24 Q That was going to be my next question, what
25 is an appropriate treatment for someone like Mr.

1 Whitt?

2 A There is the ideal treatment and that would
3 be something like cold water immersion.

4 Q Cold water immersion, how would that take
5 place?

6 A Yes, people usually have like in athletic
7 fields and like basic training scenarios in the
8 military they'll have like a Rubbermaid tub, and it's
9 filled with ice and water, like maybe a 150 gallon
10 tub.

11 Q You've seen that in the military?

12 A Yes.

13 Q Okay.

14 A Some basic training stuff, they'll have six
15 or eight of those set up.

16 Q Of course, basic training, that's a pretty
17 extreme exertional activity?

18 A Yes. Like American football, I mean, the
19 current guidelines of high school, college and pro
20 football is to always have an immersion tub set up
21 during August practices and it's become actually
22 thankfully a standard of care.

23 Q Okay.

24 A So it's, the reason it's kind of a good
25 thing is it's not expensive for people to buy a \$150

1 tub, and ice and water is usually accessible.

2 So usually cool someone in a 15 to 20 minute
3 range because someone's temp in that modality goes
4 down about a degree Fahrenheit every three minutes.
5 So if you go back to the scenario I said the most
6 common starting temps for heat stroke are 106 to 110,
7 if you just took 108 as an example there, someone
8 would get down from 108 to 104 in about 12 to 15
9 minutes. So my most common thing is 18 to 20 minutes
10 of cooling a heat stroke victim, I mean, I've cooled
11 some for 30 but --

12 Q So the cold water immersion, so using like a
13 Rubbermaid tub. What other ways?

14 A Other ways would be dousing the whole body
15 with cold water so, for instance, being under a cold
16 shower.

17 Q Would simply pouring water on the individual
18 be acceptable?

19 A You could pour water if you had the entire
20 body being covered with cold water and it was
21 perpetual, so like dousing with a hose, for instance,
22 is another modality we recommend in some situations if
23 you have, if the water coming from the hose is
24 reservoir water it might not be good but if it's well
25 water it might be cold like where reservoir water

1 might be warm during the summertime.

2 THE COURT REPORTER: Please, please slow
3 down.

4 THE WITNESS: I'm sorry.

5 A Let me go back.

6 So water from a reservoir in the summertime
7 often is hot because it's closer to the surface, I
8 mean, we make sure people practice their techniques
9 they're going to be using.

10 But if it's water that comes from a well, a
11 well kind of supply that would impact water that like
12 comes from a shower, dousing with a hose, that would
13 be cold. But it has to be perpetual introduction of
14 cold water on the body.

15 Another example is just pouring ice over the
16 entire body like literally because some people might
17 not have water but they might have ice so like
18 covering the entire skin surface with ice.

19 Another example is rotating cold wet towels.
20 This is a good portable way of treating heat stroke
21 where you might have a cooler and it has ten towels in
22 it filled with ice and water and you could strip the
23 person down to like their underwear and introduce
24 freezing, cold, wet towels on the body, and then after
25 you're done putting that tenth one on the body you

1 take off the one you put on first, put that back in
2 the cooler and keep introducing freezing, cold, wet,
3 water.

4 That's probably 60 to 70 percent as
5 effective as cold water immersion, but if you're able
6 to start cooling them right away you still can get
7 them under that key temp of like 105 within that 30
8 minute window.

9 So those are some of the more optimal ways.
10 If you told me you had none of those available, you
11 know, we'd still have to go to other considerations
12 because even like a person driving someone in an
13 ambulance we still want them cooling while they're
14 transporting them and they may not be able to do one
15 of those techniques.

16 Like a good example would be military
17 because it would be similar to a train situation where
18 they are out, you know, working where it might be a
19 couple of miles up the road, up the track.

20 In the military like if someone goes down to
21 basic training they might have a ten minute truck
22 drive back to where the cooling station is but they
23 cool them in that whole ten minute truck drive with
24 the best modality they have available in the truck
25 until they get to the tubs.

1 BY MR. SCHMITT:

2 Q What's an appropriate way then for an
3 individual suffering an heat illness to be cooled
4 while traveling?

5 A In transporting so, I mean, there's lot of
6 thing that help so you try to have a lot of these
7 things present, air conditioning would be helpful,
8 shade would be helpful, if you have a lot of water
9 available like, for instance, in coolers or water
10 bottles like, for instance, there's a flat bed truck
11 like in the military you can still douse the person
12 with cold water from water bottles or any kind of
13 containers you have.

14 Q Is drinking water while that person is being
15 transported, is that a good treatment modality?

16 A It is, the colder the better of the water,
17 and even if someone has ice bags, I mean, ice bags on
18 30 percent of the body is better than not being on the
19 body at all.

20 So those things, you are doing whatever you
21 possibly can to assist the cooling process, that's the
22 key.

23 It's one thing, no matter how this case
24 unfolds one thing I would encourage Union Pacific to
25 do, and I do this in all their cases, is I would

1 really would encourage them and for their co-workers
2 to just reiterate that point, do anything possible to
3 treat on site, during transport, in the cooling
4 station if you've waiting for the ambulance, or, you
5 know, in the ambulance or anything like that, we would
6 want to get that advice out just publicly at large to
7 just help everyone.

8 Q Is having a cooling station present on the
9 site of a work location that has air conditioning in
10 it, is that a good practice?

11 A Having a cooling station is a good practice,
12 I would have a better modality on site to cool a heat
13 stroke victim. They didn't have the opportunity to
14 really cool him well in that station.

15 I mean, it's better than nothing to be in an
16 air conditioned, shaded environment, for instance,
17 while you're waiting for an ambulance than just being
18 out in the heat.

19 But one example if it wasn't, I don't know
20 how, I'm sure all of these cooling stations are
21 different throughout the country but, for instance, if
22 there was a locker room there you could have a tub set
23 up where you could easily put water in and train it
24 each day.

25 Or the example I gave you of a cooler with

1 rotating ice, wet towels because you could easily put
2 a plastic tarp down and then keep rotating ice, cold,
3 wet towels on the person, and it would not be that
4 messy to clean up afterwards.

5 So those are things that could be utilized
6 on site while you're potentially waiting for transport
7 because I'm making the assumption there's not a
8 medical professional there in a lot of those cooling
9 station so that you would be looking eventually to get
10 this person to a medical facility.

11 Q As far as then the treatment that you say
12 should be provided by a medical professional on site
13 can that treatment, this immersion, this rapid
14 cooling, can that take place by a non medical
15 professional?

16 A Yes. That's good question. So if, I'm
17 assuming that when these teams get together there's
18 probably some kind of medical designee so someone who
19 is first aid, CPR certified, has gone through basic,
20 it's their health designee for that unit of people
21 that are working.

22 So if that's the case that person should
23 definitely initiate the best possible cooling that
24 they can utilize until the ambulance arrives, and if
25 that facility allows for an immersion tub I would

1 absolutely encourage that. If it only allows for
2 rotating the cold, wet towels I would encourage that.
3 No matter why I would recommend more than they had
4 currently in this situation that something has a
5 little better cooling rate.

6 Q Okay. What was provided here to Mr. Whitt
7 you would agree with me that at least there was, and
8 I'll just use the term first aid, there were certainly
9 first aid procedures that were followed for Mr. Whitt
10 to attempt to cool him, would you agree with that?

11 A I would agree. I think they recognized that
12 it was a serious circumstance and they were able to
13 provide shade and air conditioning and maybe some
14 ability to maybe put a cooling collar on or maybe some
15 ice or maybe put some water on parts of his body,
16 people did recognize that it was a serious condition.

17 Q Were all of those things you just mentioned,
18 the air conditioning, the cooling towels and devices
19 around his neck, in the shade, drinking water, pouring
20 water over him, were those all good practices by Union
21 Pacific?

22 A They were all very good practices and they
23 were all appropriate but none of them provide the
24 really high cooling rates that would optimize a heat
25 stroke recovery.

1 Q So in your opinion the distinction of what
2 should have been done is there should have been a more
3 optimal type of cooling, rapid cooling provided to
4 Mr. Whitt, is that fair?

5 A If he was going to be remaining on site for
6 transport I would want to have more aggressive
7 cooling.

8 If the protocol is going to be to just drive
9 the person as fast as possible after a serious
10 situation takes place I would want to have some level
11 of cooling while they're transporting him and
12 obviously not get halfway and then turn around and
13 start.

14 Q If Mr. Whitt was going to be treated on site
15 the more aggressive cooling that should have taken
16 place was this immersion, cold water immersion that we
17 were discussing earlier?

18 A I mean, each situation would have to have
19 its own emergency action plan, and I would have to
20 think heat stroke and cardiac and orthopedic injuries
21 would be your three biggest most serious situations in
22 railroads in terms of needing emergency care.

23 So your emergency action plan would have to
24 be dictated, well, what's the capacity at the cooling
25 station, if you don't have a, you know, a water supply

1 of cold water and there's not a shower there or
2 there's not a hose there the immersion might not be
3 feasible. You might have to go the route of using a
4 cooler that's filled with ice water and towels and
5 have this tarp thing that I said.

6 So each place has to decide what its own
7 emergency action plan is. There's multiple
8 appropriate methods to succeed in this venue but no
9 matter what it needed to be more effective.

10 Because they chose this route that they were
11 going to -- the big thing is they made the decision
12 that they were going to, they were going to do the
13 cooling because they didn't choose to, like they
14 didn't even, it's not like they were cooling while
15 they were waiting for the ambulance, they didn't call
16 the ambulance, you know what I'm saying, they chose to
17 be the medical providers and provide the cooling in
18 this circumstance. That's never anything we would
19 ever want to recommend.

20 If it's something that was this serious, you
21 know, just even just think of the situation, if was
22 serious enough that they were thinking of bringing him
23 to the hospital, serious enough that the supervisor
24 said, yes, let's get you to the cooling station, and
25 then serious enough that a bunch of people are

1 continuing to help him, you know, I would have thought
2 they would have at least called an ambulance while
3 they were caring for him, you know. At some point
4 they should have gotten a medical professional
5 involved in his care.

6 I mean, really the only time a medical
7 professional got involved in his care was a few hours
8 later, you know, and either his roommate or himself
9 decided that, or, you know, advice from others calling
10 people that it warranted medical, but it was, really,
11 co-workers really needed to help him at that point.

12 Q Do you agree with me that not every
13 situation where an individual gets overheated that
14 they don't need to go to the hospital in every one of
15 those cases, first of all, do you agree?

16 A I do agree, yes, it's true, in not all cases
17 of heat illnesses would you transport someone or
18 require a medical person to arrive or treat the
19 person.

20 Q In fact, if we assume that an individual is
21 simply a little overheated, too hot, been in the sun
22 too long, that the type of treatment provided by Union
23 Pacific on site can be appropriate in certain
24 circumstances, correct?

25 A It can.

1 MR. COX: Form and foundation.

2 BY MR. BECKETT:

3 Q Then the distinction, am I correct then that
4 the distinction that you're trying to make is the
5 severity of the condition that Mr. Whitt was
6 experiencing which is then dictating that a different
7 treatment protocol be followed than was provided to
8 him, is that right?

9 A Yes.

10 Q All right. So now then, and so the
11 distinction, the reason that in your opinion that the
12 first aid provided to Mr. Whitt on site wasn't
13 appropriate, that more should have been done, is based
14 on what specific condition or conditions that
15 Mr. Whitt was experiencing, what makes his case
16 different than another worker that just simply gets
17 too hot where treatment on site like Union Pacific did
18 would have been appropriate?

19 A Yes, I think what we have to boil this down
20 to is the only likelihood that Jared had was it was
21 either a severe heat exhaustion or a mild heat stroke.

22 Q So you agree he could have had either one?

23 A Let me just finish. I'm saying in terms of
24 his co-workers that were there at the time, what he
25 was going through at that moment, the only two, if you

1 had a medical professional that was there at that
2 moment there were only two possibilities, severe heat
3 exhaustion or a mild heat stroke. It could have been
4 a more heat stroke at that time but we don't have the
5 temperature, we don't know.

6 But those are the only two possibilities.
7 If you don't have medical professionals there without
8 question the people who are not medically trained have
9 to call for medical help because they are not trained
10 to make the difference between a severe heat
11 exhaustion or a mild heat stroke.

12 They're obligated to get this person help
13 because the medical professional is going to have to
14 make the decision. We know that the reason, I don't
15 think it was a heat exhaustion at all, and the reason
16 is is because a heat exhaustion person does not suffer
17 later that night, the next day, the weeks after this,
18 there's no way this is a heat exhaustion case.

19 Q We have discussed all the reasons.

20 A We already went through this. He struggled
21 and suffered for days afterwards.

22 Q So you've told me, just so that we're clear,
23 you've told me all of the bases for that opinion and
24 conclusion, correct?

25 A Right.

1 Q Okay.

2 A But the bottom line is, and this is just
3 whoever we are talking about it, athletics, it could
4 be a coach; soldiers, it could be a drill sergeant;
5 industry, it could be their co-workers. If it's
6 something serious enough that we're doing all this
7 kind of care and we're not sure what it is we got to
8 get a medical professional involved. Let them make
9 the decision.

10 I would much rather someone get the medical
11 care and say, you know what, it was a heat exhaustion,
12 make that call at that point, not a co-worker, there
13 was no person there that had the medical credential to
14 make that decision.

15 Q So though I understand in this case err in
16 favor of the worst scenario?

17 A I would think the company would want that
18 too because if it's the worst thing you would get the
19 get the right care, if it's not the worst thing you
20 have prevented the bad thing from happening, and you'd
21 much rather than have a bunch of mild stuff and be
22 sure you never have the serious thing.

23 I mean they always tell that with people
24 with heat stroke, assume the worst because you never
25 then have the death, always avoid the death or the

1 long term complication. You'd much rather have, you
2 know, maybe ten unwarranted ambulance calls in your
3 life and have saved all your heat stroke victims.

4 Q Is it important for an individual like Mr.
5 Whitt who is suffering some type of heat illness to
6 talk with that patient and talk with that individual
7 and find out how they're doing, how are they feeling,
8 what did they want to do, how do they want to be
9 treated, is it important for co-workers, supervisors,
10 everyone present to be asking those types of
11 questions?

12 A That's a great, great point. So when it
13 comes to heat stroke we actually don't ever care what
14 the patient is saying, it's really completely
15 irrelevant what the patient is telling you.

16 Q Why?

17 A The reason is is that the cognitive issues
18 affect their ability to think rationally and so when
19 I'm dealing with a heat stroke victim, I'm just going
20 to give you an example or two.

21 I once had a person tell me he didn't want
22 rectal temperature done because he was against that
23 idea. Well, we did it and it was 108.8 and he was
24 unconscious five minutes later, you know.

25 I've had people who tried to not be immersed

1 because they didn't want to be immersed, people who
2 punch and kick and scream; people who just aren't able
3 to answer quickly or coherently.

4 So when someone is suspected of having heat
5 stroke but the report back from that person is not,
6 would never dictate their care, it's their other
7 things they are presenting to you, for instance, not
8 being able to have complete sentences, not being their
9 normal kind of personality that you would expect them
10 to have, things like dizziness or extreme fatigue,
11 you're taking all this all as a collective whole and
12 making a decision.

13 The key factor here is you don't have a
14 medical professional there so you got to just assume
15 it's the worst until proven otherwise. If there's a
16 medical professional there they can then make the
17 judgment and let it sit on their shoulders that they
18 could be making a mistake but at least they have that
19 ability to make that differential.

20 The key thing too is temperature is the key
21 starting point to really have a good sense of what's
22 going on.

23 Q In order to be able to determine whether or
24 not the individual can speak in complete sentences of
25 course you need to talk to that individual?

1 A There's no question you're attempting to
2 communicate with that person, what I'm saying is that
3 what's coming out of their mouth is not meaningful to
4 you, you're not making your judgment, like if I said a
5 fifth of the people I've treated in my life if I asked
6 them if they want me to cool them right now they would
7 have said absolutely not, but I didn't listen to them,
8 I never took their advice, I never made any of my
9 medical decisions based on the advice they were
10 giving.

11 Q But you're talking to them because you want
12 to, that's part of your evaluation though to see how
13 they're going to respond?

14 A There's no question.

15 Q So someone like a supervisor on site, it's a
16 good practice for that supervisor to be talking with
17 that employee and getting information from that
18 employee, correct?

19 A That's a very good point. But the thing is

20 --

21 Q But is that correct?

22 A It is, yes. Part of your assessment would
23 be to have a verbal dialogue with the person.

24 But all I'm stating is the things they say
25 to you, if you're suspecting a severe heat illness,

1 that is a possibility of a severe heat illness, which
2 I think people in this case thought it might have been
3 a severe illness, the other ability to make logical
4 thoughts can be compromised so we don't listen to
5 their advice on terms of their care.

6 We would never, like the supervisor
7 Dalebout, who called, and I think Birt might have
8 asked Jared a couple of times, we would never, that
9 person asking them how he feels is irrelevant at that
10 point.

11 I mean, this person was laying down on the
12 side, not feeling so well that his supervisor had to
13 lay him back down, being carried to a car, he's like I
14 think being reclined in a car being transported
15 having, feeling very uncomfortable.

16 His testimony is, you know, pretty powerful
17 that he was not feeling well at this point. So what,
18 him telling us like, oh, yeah, I think I should go
19 back to the cooling station, that doesn't mean
20 anything to us, we would never want that to be part of
21 our judgment at that point.

22 Q I mean the practices though, if we take some
23 of those things that were occurring, if Mr. Linford,
24 if he's talking with Jared, Jared is in the shade and
25 Mr. Linford puts him back down, of course that would

1 demonstrate that Mr. Linford is a caring person trying
2 to do an appropriate things, right?

3 A Yes.

4 Q I mean that would be --

5 A That would be a good move.

6 Q That would be a good practice, putting him
7 back down?

8 A Yes.

9 Q Helping Mr. Whitt, whether Mr. Whitt was
10 able to walk on his own, ambulate on his own, but at
11 least putting people on both sides of him to make sure
12 he doesn't stumble and fall, that's a good practice,
13 right?

14 A Absolutely.

15 Q Reclining a seat to make it easier to get in
16 and out of the truck whether or not the person needs
17 it but at least reclining it to facilitate entry into
18 a vehicle, that's a good practice?

19 A Yes.

20 Q Air conditioning on high in the truck,
21 that's a good practice?

22 A Absolutely.

23 Q Do you agree with me that everything that
24 was done by Union Pacific, let's just pick the point
25 at least to the point that he's in Mr. Birt's truck

1 and he's being transported away everything that was
2 done was up to that point was appropriate, acceptable
3 good practices by Union Pacific?

4 A I totally agree, I actually even stated
5 before, I don't know what happened before Linford saw
6 him, but from the moment Linford got him, took care of
7 him, recognized immediately it could be serious, got
8 him to Birt's car with help to keep him safe so he
9 might not have like fainted or hurt himself, Birt
10 immediately said, I'm going to get him and driving
11 him, that's exactly what you would want to have
12 happen.

13 Q Okay.

14 A I am totally on board with that point.
15 And given the possibility of like how long
16 it would have taken an ambulance to come and pick him
17 up and then bring him back, like that was all optimal,
18 that's what I would have done, maybe might have had
19 some additional cooling en route possibly.

20 But up to the point when he got the call
21 from the supervisor that was really looking out for
22 the best for him.

23 I'm not saying that I don't know if Jared
24 was potentially down before Joe got to him but from
25 the moment Joe recognized there was a problem to the

1 point that that call was received by Birt that's what
2 I would have wanted to have done so I had no
3 criticisms of that at all.

4 Q Okay.

5 A Maybe the ability to cool him en route like,
6 for instance, if the hospital was 40 minutes away I
7 would have wanted cooling take place during the
8 transport.

9 MR. COX: Let me interrupt for a second
10 if I might. Both of you are saying that it was
11 Joe Linford that found Jared laying under the
12 trailer. I think it was actually Mr. Ornellas
13 that did all that. Since you're both confused
14 about that I just wanted to clarify that.

15 THE WITNESS: I may have made that
16 mistake.

17 BY MR. SCHMITT:

18 Q Okay. So with that modification your
19 testimony is, you stand by your testimony in all other
20 respects?

21 A Yes. Just the person who found him, all
22 that stuff.

23 Q That's fine. Do you think it's appropriate
24 for a manager to be concerned, a director, a manager,
25 to be concerned about the condition of their

1 employees?

2 A Yes.

3 Q I mean, do you have criticism about Mr.
4 Dalebout expressing concern about Mr. Whitt's
5 condition and calling him to talk to him about it?

6 A I definitely think it's a good idea for a
7 supervisor to call but the more important person,
8 let's just say the possibility of severe heat
9 exhaustion or a heat stroke, the more important
10 opinion in that call was definitely the person driving
11 him, not the patient himself.

12 Q Okay.

13 A You would never want a supervisor from a
14 remote spot talking to a person, for instance, who
15 might be a heat stroke victim and then making the
16 judgment based on that.

17 The only person that would have mattered in
18 that car was talking to David, and David was like, I'm
19 feeling that we should transport him, that's why I'm
20 bringing him to the hospital, I'm already en route,
21 and his supervisor didn't support him.

22 Q But you're not critical of Mr. Dalebout
23 having concern about the condition of his employee and
24 asking him, hey, how are you doing, and at least
25 discussing the situation with him?

1 A Absolutely appropriate that he made the call
2 to the vehicle. I just don't think he should have
3 impeded his care.

4 Q Okay. On that point as far as impeding his
5 care, now ultimately you understand that Mr. Whitt
6 expressed, verbally expressed the decision that he
7 wanted to return to the cooling tent, is that right?

8 MR. COX: Form and foundation.

9 A You have to understand that my opinion is
10 that he suffered a heat stroke.

11 BY MR. SCHMITT:

12 Q Right.

13 A So Jared's thought process of being asked to
14 be transported to the cooling station is completely
15 not relevant.

16 Q All right. But you agree with me that the
17 testimony and the evidence that you've reviewed is
18 that it was Mr. Whitt, I understand you're saying his
19 decision doesn't make any difference, but it was
20 Mr. Whitt that expressed --

21 A Yes.

22 Q -- the desire, the decision, announced that
23 he wanted to the return to the cooling tent, do you
24 first of all agree with that?

25 MR. COX: Excuse me. Form and

1 foundation, it misstates evidence.

2 A It is true, what you said is true, Jared may
3 have requested to go back to the cooling station.

4 But that's also very much in line with heat
5 stroke victims that I've seen in my own life, that
6 they ask for a different care for themselves.

7 So the person who was driving Jared who
8 thought he needed to get to a hospital, that's the
9 person who was kind of his provider at that moment, he
10 was his guardian at that moment, he was the closest
11 thing to a medical provider at that moment. He was
12 the one who should have made the ultimate decision
13 regarding his care.

14 BY MR. SCHMITT:

15 Q If we assume that, let's just take a
16 hypothetical that there was no hospital within a 500
17 radius or a health care professional within a 500 mile
18 radius because you're working out in the middle of the
19 desert somewhere.

20 A Okay.

21 Q In that situation, if we make that
22 assumption that an option of taking that person to a
23 hospital wasn't available do you agree with me that
24 the first aid, the treatment that was provided by
25 Union Pacific to Mr. Whitt then in this situation was

1 appropriate, reasonable treatment?

2 A Okay. The case you described, then you
3 definitely would have had a more aggressive cooling
4 modality on site because you would have known there's
5 no way I'm going to get this person cooled to the
6 hospital so you would have had a tub or rotated cold
7 water towels, any appropriate care would have been to
8 have a much more aggressive cooling on site.

9 I don't think David would have embarked on
10 the beginning of that trip if he knew he had a 500
11 mile drive, I think I made the drive thinking that he
12 was, you know, ten, 15 minutes from a hospital.

13 One thing to always keep in the back of your
14 mind too is that David was thinking that this might
15 have been a heart condition issue.

16 Q I think that was his testimony.

17 A There's many reasons for wanting to take
18 him. David was thinking maybe the heart thing might
19 have been related to the heat illness or a cause of
20 the heat illness.

21 But I am not aware if they had an AED on
22 site in the rail yard. I'm not sure of that. But the
23 only way you would ever care for a heart person is
24 getting him close to where the AED is, and that's why
25 because even if you forget when Dalebout makes the

1 call, forget the heat thing, just the possibility that
2 this was a heart attack, the only way he would ever
3 survive is getting him to the hospital because the AED
4 is the only thing that's going to save someone's life
5 if they go into cardiac arrest.

6 So from my perspective Birt had the right
7 hunch, the right thought, it fell in line with
8 Ornellas, you know, feeling that it was something that
9 required some care.

10 And if you look at Birt's testimony, one of
11 the most compelling things was, well, first of all you
12 look at his action, his action was let's get him to
13 the hospital until the supervisor stopped that
14 property.

15 But Birt looking back whenever he gave his
16 deposition, when he said he considered a couple of
17 days later he wishes he had continued on to the
18 hospital, I mean, because often people's first
19 intuition is correct and he saw a person in front of
20 him that was not the normal Jared Whitt and he's like,
21 I'm going to get this guy the hospital based on what
22 he's telling and what I'm seeing, and he regretted a
23 couple of days later not following through on his
24 actions.

25 Q Is the long term condition that Mr. Whitt

1 currently experiences regardless of what the cause was
2 but at least the condition, do you understand he's
3 complaining of some issues with his left upper
4 extremity?

5 A Yes.

6 Q Some numbness or weakness or tingling, is
7 that right?

8 A Yes.

9 Q My question to you is that --

10 A This is related to the surgery he recently
11 had, right?

12 Q Well, it's my understanding he recently had
13 surgery.

14 A Okay. I don't know a follow up related to
15 the surgery or anything, details related to that, but
16 I'm assuming you're connecting these two parts.

17 Q Maybe I should ask it this way, what in your
18 opinion was the long term sequela that Mr. Whitt
19 experienced as a result of this heat related incident?

20 A That's a good question. So I don't know if
21 we have a full understanding of that yet, for
22 instance, I don't know if he still has heat
23 intolerance, like typically someone would have a heat
24 tolerance test down for something like that, because
25 that's one of the common things that happens after a

1 heat issue is heat intolerance. So that hadn't been
2 done. I don't know if he's gone through a full -- I
3 don't think he has any long term cognitive issues,
4 thankfully.

5 But hopefully this is, I mean, knock on
6 wood, hopefully this is the only lingering issue that
7 he has from that particular episode.

8 Q The left arm condition?

9 A Yes. But like I said I don't want to say
10 that convincingly because I don't know of any evidence
11 of a heat tolerance test being done on him.

12 Q The only other thing that you suspect that
13 could be out there would be possible heat intolerance
14 but you just don't know because we don't have any test
15 results?

16 A That's just based on like seeing Jared's
17 testimony and hearing from Jim that Jared seems to be
18 doing better.

19 Q Okay. Now, do you understand that Mr. Whitt
20 filed this lawsuit claiming two separate incidents,
21 one was a heat related illness, and another one had to
22 do with a lifting issue?

23 A Yes, I believe that was two to three weeks
24 earlier in the same June.

25 Q My question is have you formed any opinions

1 as to the cause of Mr. Whitt's left arm condition that
2 he currently experiences?

3 A Yes, that's a good question. I mean,
4 obviously I have to be a bit speculative. But in
5 terms of my opinion remember earlier I had said
6 sometimes a heat stroke reveals some of your weak
7 links in your body because that hyperthermia can cause
8 different things so that thing that happened in
9 earlier June might have been amplified or brought back
10 into the fold because of the heat stroke.

11 So he had said he had weakness and tingling
12 in his legs and arms and then there was some kind of
13 tense contractures that were happening, I think his
14 wording might even have been beyond what your normal
15 like amount of flexion, for instance, might be. So
16 that might have exacerbated that previous condition,
17 might have been made it worse.

18 The thing to consider, that was another
19 potential benefit of going right to the hospital
20 because there's, that's not uncommon to see something
21 like this, and at the hospital they could have given
22 him medication, pharmaceutical intervention to
23 actually stop that from happening, so we might have
24 been able to prevent, the condition that he is
25 suffering right now we might not be dealing with this

1 at all right now if he had gone right to the hospital.

2 Q But we don't know?

3 A We don't know. Like I said all of it has to
4 speculative on what I wanted him to get to the
5 hospital and get medical care right away so we have to
6 make our best guesses right now.

7 Q You said that, as I recall you said
8 something to the effect that this is not an uncommon
9 situation or uncommon condition or maybe it's a common
10 condition?

11 A In heat stroke victims, I don't want to say
12 common meaning like greater than 50 percent. I have
13 seen in many cases of heat stroke I've care for people
14 having tense contractures of their musculature that
15 goes on for extended periods of time.

16 So it might be in their legs that they have
17 extreme contraction of like their hamstrings or their
18 quadriceps muscles, it might be their biceps, it could
19 be their wrist flexors, I mean we could be cooling
20 people for heat stroke and they could be sitting there
21 like this like for 15 or 20 minutes in a row.

22 But when you get their temperature down
23 really fast that helps relieve that because obviously
24 the heat stroke is subsiding. Or if someone is in the
25 hospital they will give like relaxants, muscle

1 relaxants, they'll often put in an IV to calm this
2 person down.

3 And that continued contraction, I mean, this
4 can happen to any human being, if you sit there
5 holding a cell phone next to your ear for a three hour
6 phone call when you get off the phone you can't like
7 move your arm.

8 So imagine that happening forcefully,
9 uncontrollably in a heat stroke victim for an extended
10 period of time, that obviously can be related to some
11 of the issues he's dealing with now.

12 Q Have you ever seen a heat stroke victim
13 or -- let me strike that and be broader.

14 Have you seen someone who suffered a heat
15 related illness regardless of the severity suffer
16 permanent numbness, weakness in one upper extremity as
17 a result of that?

18 A That's a good question. So thankfully for
19 most of the heat strokes I have cared for, I mentioned
20 to you earlier they're all cooled really rapidly and
21 they survive and they don't have long term sequela.

22 But I do know of cases, people in the past
23 in the military that have had situations like that
24 where they have ongoing issues and it might not just
25 be, it could be the arm or the leg, it could also be,

1 I've known of people like in the upper muscles of
2 their neck, whatever went into this kind of tension
3 mode for an extended period of time could have been
4 injured from that.

5 Do you mind if we take a quick break?

6 Q Fine.

7 (Recess)

8 (Time noted: 11:37 a.m.)

9 MR. SCHMITT: Back on the record.

10 BY MR. SCHMITT:

11 Q We were talking about the current condition
12 Mr. Whitt experiences with his left arm issues. My
13 question is are you able to say whether with any
14 certainty, reasonable certainty, whether or not the
15 first incident with the lifting, whether or not that
16 had any role one way or another in the condition that
17 Mr. Whitt is currently experiencing?

18 A I think it's related because I think that
19 first condition, he was dealing with something that
20 was a little weak in his body when he had the heat
21 stroke.

22 Q But how do you know that, what do you base
23 that on?

24 A I mean, it's not, it's just a professional
25 opinion. I mean, he had an injury and it's likely he

1 wasn't fully recovered and then he has this extreme
2 stress of a heat stroke, and then that previous injury
3 is now something that's bothering him, you know, for
4 the long term.

5 So it kind of makes sense that there was
6 something that was weak and now is stressed even more
7 and is now affected by it. I can't give you medical
8 evidence to back that up.

9 Q Right. What I'm trying to find out is it
10 really speculation on your part, is it just an
11 educated guess?

12 A It is an educated guess.

13 Q Okay.

14 A The fact of the matter is there's no
15 evidence in the world to specifically tie this
16 condition that happens two weeks before with a heat
17 stroke because we don't have, there's no ability to
18 pull from any evidence that we have to say that's
19 true.

20 Q If there was an incident, whenever it
21 certainly wasn't of a magnitude that Mr. Whitt
22 reported to anyone at the time, you understand that?

23 A Yes. I remember reading that he didn't
24 report that until a month or two later.

25 Q Are you aware of any evidence that he was

1 actually having any problems, complaints, anything at
2 all with that left upper extremity during the, let's
3 say, well, for a significant period of time before the
4 heat related illness?

5 A I mean, I don't remember him saying that
6 there was an issue during the course of the day.

7 Q Right.

8 A Yes.

9 Q So that's really my question is, I mean this
10 issue of this, of the lifting these bags of anchors, a
11 couple of weeks before that he doesn't report, that he
12 doesn't lose any time, that it's my understanding at
13 least from what he said that he may have had a little
14 bit of soreness at least initially, is it fair to say
15 that it's really a guess whether or not that had any
16 role at all in the heat related illness and his
17 current condition?

18 A Well, I don't think it had a role, well, the
19 first injury definitely didn't have any role in him
20 having a heat injury the second time.

21 Q All right.

22 A They would not be related to each other.

23 Q All right.

24 A I think the heat illness might, could have
25 exacerbated that that's what had happened earlier.

1 Some of the things do kind of make intuitive
2 sense a little bit in that he had this issue, you
3 know, a couple of weeks earlier and this was a pretty
4 unique day based on his testimony his machine was not
5 functioning properly.

6 Q Well, we'll talk about that.

7 A But it is connected only because if he was
8 doing all of this upper body work that he's not used
9 to on this particular day it does make sense that
10 would kind of, you know, if you were going to reinjure
11 it on a particular day this would be the day because
12 he's doing all this unique work that he's not doing
13 over the last couple of weeks so that makes sense from
14 an overuse perspective.

15 Q I mean, sure, there's certainly just a time
16 sequence that it's interesting perhaps?

17 A He did a lot of upper body labor that
18 particular day, the day he had the heat illness, based
19 on his testimony.

20 Q Okay. But as far as whether or not his
21 condition, if he, whatever the condition may have
22 been, if it was exacerbated by this heat illness that
23 --

24 A I don't know.

25 Q You don't know, that really is just a guess?

1 A Yes.

2 Q Fair enough. As far as, Doctor, let's just
3 see if we can just talk really briefly about that
4 first incident.

5 As far as what was occurring that day with
6 these bags of anchors, what was occurring, what wasn't
7 occurring, are you rendering any opinions about that,
8 Doctor?

9 A No, I really wasn't focused on that.

10 Q You're giving your specialty, you're here
11 today to talk about the heat related illness incident
12 that Mr. Whitt has filed in this lawsuit?

13 A Prevention, recognition and treatment of
14 heat stroke I think is the focus of my testimony.

15 Q So you've authored a report which is
16 Exhibit 40, is that correct?

17 A Yes.

18 Q As we have talked about earlier this
19 contains all of your opinions and your bases for your
20 opinions?

21 A Yes.

22 Q And of course a lot of what we've already
23 discussed here is applicable, has provided information
24 for the opinions of what, that you've actually
25 expressed here in your report, right?

1 A Yes.

2 Q Okay. So if we go through these what I'd
3 like to do is discuss then all of your opinions and
4 your bases for your opinions. In the way you break
5 down your report there's, they seem to be in sections
6 called considerations.

7 A Yes.

8 Q What are you trying to accomplish by that,
9 what does that mean when you say consideration one,
10 consideration two, et cetera?

11 A Well, we set the stage in consideration one
12 of the overview of what happened that day.

13 And so then we tried to take a look at if he
14 had a heat stroke, which I believe he did, what are
15 the things that predispose someone to have a heat
16 stroke, so that's in consideration number two, those
17 are some of the most common things that alter
18 someone's exercise heat tolerance so that's why I
19 presented that there.

20 Consideration three are the things that I
21 think may have been present that particular day for
22 this particular case.

23 Q Okay.

24 A Then consideration four is specific to what
25 was present that maybe could have been different or

1 changed or optimized to maybe prevent it from
2 happening, recognized sooner or treated better.

3 Q Okay.

4 A Then five brings back some of the big ticket
5 items to kind of make a synopsis of some of the things
6 that I mentioned earlier.

7 Six is kind of related to what I brought up
8 earlier is if he is going to return to just the same
9 exact work that he's done previously that I do believe
10 that we should be sure his exercise heat tolerance is
11 adequate. I mention that here because I don't know if
12 that's completely recovered or adequate, just to make
13 sure he's safe if he goes back then.

14 Then seven is just my summary.

15 And then as you know I give my list of my
16 prior experience as an expert.

17 Q Okay. In going through each of those then,
18 item number one or consideration number one, you had
19 indicated that the heat illness has been diagnosed by
20 multiple physicians to be exertional heat stroke, did
21 I read that correctly?

22 A You did.

23 Q Have you personally read the medical records
24 that were authored by the providers who actually saw
25 Mr. Whitt at the hospital and in the weeks and months

1 following?

2 A I would actually want to clarify that
3 statement from my opinion, that the heat illness was
4 referred to as a heat stroke by someone, I don't think
5 that there's evidence that a physician specifically
6 diagnosed a heat stroke. So my follow up in recent
7 reading makes me clarify that statement.

8 Q Understood. Are you aware that Mr. Whitt
9 has retained an expert physician, Dr. O'Connor --

10 A Yes.

11 Q -- who has opined on that specific issue?

12 A Yes.

13 Q You're aware that plaintiff's retained
14 expert has expressed an opinion that Mr. Whitt did not
15 suffer an exertional heat stroke, do you understand
16 that?

17 A I do. I think he may consider changing his
18 mind when he has more information available to him
19 like some of the information that I have now but
20 that's obviously up to his prerogative.

21 But I did want to clarify that one thing,
22 that it was not diagnosed but it was referred to as a
23 heat stroke in different medical records.

24 Q If Dr. O'Connor doesn't change his opinions
25 then your opinion is different than what

1 Dr. O'Connor's opinion is, correct?

2 A That's correct.

3 Q Have you ever spoken with Dr. O'Connor?

4 A Yes.

5 Q When you speak with him?

6 A Not about this case, no.

7 Q Okay.

8 A He's a close friend of mine.

9 Q Okay.

10 A I know him quite well.

11 Q Okay.

12 A I've known him for ten years. When you said
13 have we spoke before, like thousands of time.

14 Him and I worked medical staff together at
15 the marine corps marathon, we have treated many heat
16 strokes together. And him and I actually co-wrote the
17 U. S. army, the specific doctrine that dictates heat
18 stroke care in the U. S. army, him and I co-wrote the
19 document.

20 So we have a long history together, so I'm
21 disagreeing with a friend and colleague of mine.

22 Q A respectful disagreement, right?

23 A Yes. But remember I do think Fran
24 specifically stated it was a severe heat exhaustion, I
25 think that was his opinion.

1 And I said to you earlier, remember I said I
2 thought things were more solidified in my belief, that
3 it was a minor mild heat stroke and that has to do
4 with now the connectivity of what happened to Jared
5 after. In the days and weeks after, so I think Fran
6 has to also consider rendering with this new
7 information.

8 Q And the new information is what you
9 discussed earlier, it's the questions that, the
10 questions and answers that were provided by
11 Mr. Whitt's lawyer that are marked as Exhibits 41 and
12 42, information that came from Priscilla Whitt and
13 Brandon Peppers?

14 A Yes.

15 Q Who is Brandon Peppers, do you know?

16 A No. I am assuming it's a friend of the
17 family.

18 THE WITNESS: Is that a friend of the
19 family, Jim?

20 MR. COX: Yes. It's Brandon that went
21 with Priscilla to Chicago to help drive Jared
22 home.

23 THE WITNESS: Yes.

24 MR. SCHMITT: Okay.

25 BY MR. SCHMITT:

1 Q Okay. So in regards to this specific
2 indication you haven't talked to Dr. O'Connor about
3 this case?

4 A Not about the details, no.

5 Q I don't recall, did you provide
6 Dr. O'Connor, Dr. O'Connor's name or recommend him to
7 Jim Cox as someone that should become involved in this
8 case?

9 A I'm 99 percent sure I have. I've referred
10 Fran in a few different cases. Anytime someone asks
11 for an MD, Fran is like literally the leading person
12 in the U. S. army related to heat illnesses. So when
13 someone asks me for a name that's a name I often will
14 give. So I do believe I did it but I don't actually
15 specifically remember that.

16 Q The consideration number one continues: The
17 contracture he experienced with his left limb at the
18 time of the incident on June 28, 2012 likely played a
19 role in his current problem. Let me stop there.

20 Have you given me all the reasons and the
21 bases for that opinion already here in this
22 deposition?

23 A Yes.

24 Q All right. Then it says: And likely
25 exacerbated an earlier work incident. And now we have

1 already discussed that, that in your opinion it would
2 really be an educated guess?

3 A It's my guess but it's, there's not a, I
4 don't think anyone could give you a medical foundation
5 connecting those two.

6 Q Continuing it says: One of the critical
7 contributing factors to his medical complications was
8 a lack of proper health slash safety diligence
9 regarding the prevention, recognition and treatment of
10 his condition. Tell me what you mean.

11 A Sure. I think we kind of covered the
12 treatments, I don't know if we need to get into all
13 that right now.

14 Q If we have already covered it then that's
15 fine, we don't need to repeat it.

16 A I'm satisfied with that.

17 Q Until there's something you want to add,
18 Doctor?

19 A No, we went through that a lot. And
20 recognition is similar to some of the stuff I
21 mentioner to you before, the fact that if you weren't
22 sure if it was a heat stock or heat exhaustion I think
23 you should have assumed the worst until proven
24 otherwise, and I would have encouraged getting the
25 temperature at the hospital.

1 Prevention we haven't covered yet. But it
2 depends on where you want to cover it because it's all
3 the items in consideration four, most of those are
4 prevention items.

5 Q All right.

6 A There are some big ticket items that we may
7 want to spend more of our time on.

8 Q In item number four?

9 A Prevention in general.

10 Q We'll talk about those in a moment. It
11 seems as though consideration number one is almost
12 somewhat of a summary that you're going into detail
13 later?

14 A It sets the stage.

15 Q Okay. Then the last sentence in
16 consideration one: Additionally many factors in this
17 case show the intense thermoregulatory demands placed
18 on this occupation were not appreciated and the health
19 safety policies in place in June 2012 to protect the
20 employee's health were grossly inadequate. Tell me
21 what you mean and are those going to be discussed
22 later?

23 A You have to tell me when you want to talk
24 about under prevention, we already have covered the
25 recognition and treatment side, so that's part of that

1 grossly inadequate, especially the treatment side of
2 things.

3 Q Okay.

4 A Disappointed that he didn't continue on to
5 the hospital. But the prevention side we haven't
6 talked about.

7 Q Let's then talk about the prevention, we'll
8 talk about it now understanding then that's --

9 A It will be later.

10 Q -- later.

11 A Sure.

12 Q So tell me what you mean, what in your
13 opinion should have been done in this case regarding
14 prevention?

15 A Sure. So there's approximately six key
16 items that affect someone's rise in body temperature.
17 So the two biggest items are the intensity of the
18 activity and the environmental conditions. So if you
19 look -- I have to just pull it up it. Just one
20 second.

21 All right. It's Exhibit 11. It's from
22 Linford and it's the quality safety meeting process
23 heat stress prevention. So it's kind is an overview
24 of their heat guidelines from Union Pacific. I want
25 to make sure if there's a second, it also includes

1 Exhibit 12 a little bit.

2 Q Exhibit 12 or Exhibit 13?

3 A No, 11 and 12 mostly for --

4 Q All right.

5 A -- what I want to talk about.

6 Q Okay. And Exhibit 11 is a document that you
7 understand was authored by Union Pacific, it was a
8 program, some training that was provided?

9 A I think it came out about 15 months before
10 the incident.

11 Q Okay.

12 A So the big take home here when you read this
13 document is that there are no specific guidelines
14 given to the supervisors here on how you would modify
15 work to rest ratios.

16 Work to rest ratios are kind of your key way
17 of protecting your employees or your soldiers or your
18 athletes or whoever you're caring for because the work
19 to rest ratios brings into the two key items we just
20 mentioned.

21 It modifies the intensity which I just said
22 that's the key factor that drives the temperature up.
23 It modifies the intensity based on the environmental
24 conditions.

25 So just as an example, just so you know what

1 I'm talking about here, I brought a few others, just
2 let me see, so the one I already shared with you,
3 Exhibit 44.

4 Q Yes.

5 A And this just gives you an example of
6 different wet bulb globe temperatures and how you
7 would modify your work to rest ratio based on the
8 environmental conditions. So obviously as it gets
9 hotter and you're doing, if it gets hotter you make
10 modifications and as your work load gets heavier you
11 make modifications.

12 Q And this is from, at least according to what
13 the document says it's from an OSHA technical manual?

14 A This is just an example.

15 Q Okay.

16 A I'm just providing an example because in
17 your, in this document here, so that's one example,
18 I'm going to give you another one, this is one example
19 from the military, so you might want to put an exhibit
20 on this.

21 MR. SCHMITT: We're going to mark this
22 document you're now referring to as Exhibit 49,
23 and it appears to be out of a document, page
24 number 48, water requirements and soldier
25 hydration.

1 (Defendant's Exhibit 49 for Identification.)

2 A I can get you the document where that comes
3 from.

4 BY MR. SCHMITT:

5 Q That's some type of a military document?

6 A That was written by people in the military
7 as recommendations for soldiers. I'm giving an
8 example of wet bulb globe temperature, the
9 abbreviation is WBGT, that's the common term that's
10 used.

11 This is just an example again of easy work,
12 moderate work, hard work, and you make modifications
13 as the temperature goes up.

14 Q And the modifications that you are trying to
15 make or that you are making are in regards to --

16 A Usually --

17 Q -- intensity of activity?

18 A Usually two big things, the amount of time
19 you're exercising, and the intensity. And so that's
20 why we call it the work to rest ratio.

21 Q The amount of time exercising and what is
22 the other one?

23 A And the intensity. Amount of time and
24 intensity.

25 Q Okay.

1 A That's why you make modifications based on
2 the environmental conditions and the work you have
3 planned for that day.

4 So this is another example, this is from
5 American College of Sports Medicine. This is from
6 their position statement.

7 MR. SCHMITT: We'll mark this document as
8 Exhibit 50.

9 (Defendant's Exhibit 50 marked for
10 Identification.)

11 A So it's similar again, I'm just giving you
12 an example of increasing WBGT and how you make
13 modifications as it gets hotter.

14 BY MR. SCHMITT:

15 Q You used the term WBGT, what does that stand
16 for?

17 A That is the wet bulb globe temperature so
18 you saw that in the OSHA thing and that's kind of the
19 gold standard for knowing the environmental conditions
20 and we can talk about that in a second, I'll explain
21 that.

22 Q Where did you obtain Exhibits 49 and 50?

23 A That's a good question. Exhibit 49, I have
24 to get to you, that's from a military kind of
25 doctrine.

1 Q So you brought this document with you here
2 today?

3 A Yes. That's what I wanted to share with
4 you.

5 Q Okay.

6 A I will make a note to get it to you.
7 Military doctrine, WBGT, which means I'm also going to
8 need to get you this one here.

9 Q Exhibit 50?

10 A That's from I said from ACSM so I will get
11 you a copy of that.

12 Q These are documents you can just email?

13 A Yes.

14 Q Okay.

15 A Then this last one, as an example, this is
16 Georgia High School football, this is again wet bulb
17 globe temperature, and here you can see they changed
18 the amounts and number, the amounts and length of rest
19 breaks based on the environmental conditions.

20 MR. SCHMITT: We'll mark this as Exhibit
21 51.

22 (Defendant's Exhibit 51 marked for
23 Identification.)

24 BY MR. SCHMITT:

25 Q This was from a high school?

1 A The Georgia High School policies.

2 Q Okay.

3 A So I gave you examples from military, from
4 work which is OSHA, I gave you examples from two
5 athletic settings.

6 Q So you've now presented us with examples of
7 these different --

8 A So this is what I mean in this document, a
9 supervisor who is not medically trained, because we
10 made the assumption at this work setting and we don't
11 have a medical professional.

12 So we would want to provide guidance on,
13 okay, if it is just environmental condition outside
14 what is the modification we need to make because the
15 trained employee is not, he's not a heat physiologist,
16 he's not an MD, he's not trained specifically on how
17 to make modifications.

18 So like these OSHA guidelines are actually
19 done pretty well just to give an example of some of
20 the things that should be considered adopting. So
21 this is by far the biggest thing in terms of
22 prevention that was not in place.

23 Q All right. So let me talk in a little bit
24 greater detail, so the wet bulb globe temperature or
25 WBGT?

1 A Yes.

2 Q What is that?

3 A Good question. Okay. So wet bulb globe
4 temperature is three different temperatures combined
5 into one, so it's a calculation.

6 So one is the ambient temperature, that's
7 just the temperature you hear when you're listening to
8 the radio, and that's ten percent of the calculation.

9 Then there's the wet bulb temperature, that
10 factors in the humidity that's in the air, that's
11 70 percent of the calculation.

12 Then there's the black globe temperature,
13 that's the effect of the radiant heat from the sun,
14 and that's 20 percent.

15 So then you have your three temperatures and
16 then you can obviously do the percentage of that, you
17 get an actual wet bulb globe temperature, and that's
18 this number here, the calculation.

19 Q Okay.

20 A Let me tell you why there's a big advantage
21 to this, okay, so as you can see in some of these, for
22 instance, I mentioned already Exhibit 12, and it's
23 also part of Exhibit 11, it's not as pretty because
24 it's not in color, but these are examples of heat
25 index, not wet bulb globe temperature. The reason why

1 WBGT is better is because if you note at the bottom of
2 the heat index recommendations it says --

3 THE WITNESS: I don't know if you have to
4 type all this but it's in the text.

5 A -- the heat index guides were devised for
6 shady, light wind conditions and exposure to full
7 sunshine can increase heat index values by up to 15
8 degrees Fahrenheit.

9 The benefit of WBGT is you don't have to
10 make that estimate, that globe temperature is giving
11 you that reading so you don't ever have to speculate
12 is it sunny, is it hot, is it cloudy so that's taking
13 that into account.

14 So that's why everyone, that's why most of
15 the governing bodies of industry and military and
16 sports have gone to the WBGT recommendation because it
17 just provides a huge advantage so you don't have to
18 worry about kind of guesstimating and adding that into
19 the equation. So I did out some sample calculations
20 so I can go over with you from that day.

21 Q Okay.

22 A I thought this would be interesting.

23 Q Here's what we'll do, these are handwritten
24 calculations that you prepared?

25 A Just remind me that I have to get

1 photocopies.

2 Q We'll get photocopies of all of these.

3 MR. SCHMITT: We will put an Exhibit 52
4 sticker on here.

5 (Defendant's Exhibit 52 marked for
6 Identification.)

7 BY MR. SCHMITT:

8 Q Tell me what this is, Doctor.

9 A Sure. So I did a few different examples.
10 So the first one is 3:51 p.m. so this is close to
11 when, you know, he was having difficulties and it's
12 during the hotter time of the day and I realize that's
13 not how it was the whole day. It was approximately
14 100 degrees Fahrenheit.

15 Q Where did you get that information?

16 A Actually from the most local weather station
17 I think said it was like 99 degrees at that time.

18 Q Okay.

19 A That's just to give you an idea because it's
20 only 10 percent of the equation, 99 would be like
21 one-tenth difference, just giving it as an estimate
22 for you.

23 Q So on that point on determining the actual
24 temperature then your source, you're consulting the
25 National Weather Service?

1 A Yes.

2 Q And do you agree with me that the National
3 Weather Service is a more accurate reflection of the
4 actual conditions out there than say an employee
5 estimating or guessing in their mind what the
6 temperature might be or what the sun might be or what
7 the wind might be? Do you agree with me?

8 A That's A loaded question. The, I would much
9 rather have them done this on site, it's a whole
10 separate discussion we can get into.

11 Q Right.

12 A You really always should get temperature
13 assessment on site because you have a microenvironment
14 and you have different issues to consider and I will
15 just tell you like in military bases and in sports we
16 always tell them to get the environmental conditions
17 on the field or site you're going to be having to do
18 your work in.

19 You don't want to rely on something that's
20 six miles or ten miles away because, for instance, you
21 know, even Union Pacific says in some of their
22 materials that the temperature near the rail might be
23 warmer than it is just in general because it heats up
24 near the tracks.

25 Q Okay.

1 A In fact, one document said it might even be
2 30 degrees higher on a full sun day.

3 So just to give you an example, so it was
4 about 45 percent relative humidity when it was the
5 hottest time of the day. So when --

6 Q What's your source for the 45 percent
7 relative humidity?

8 A That's the same place I'm getting this.

9 Q All right.

10 A For now the only document of temperatures I
11 have is the thing from O'Hare. I don't have anything
12 else.

13 Q So just that we're clear though you agree
14 with me that the actual weather conditions that day,
15 that a more accurate source of information and more
16 reliable is the weather source is the weather services
17 rather than employees who are estimating or guessing
18 as to what their recollection is a year later?

19 A Right. There's no question that the local
20 weather service is better than someone's subjective
21 recollection.

22 Q Okay.

23 A I totally agree with that.

24 Q Okay.

25 A But the employees which is the second item

1 for prevention, they should have gotten temperature
2 assessment on site, that should be a standard
3 operation.

4 Q All right. And the point being there
5 because there's been I think some testimony where
6 witnesses were asked, I'm just going to use a term
7 leading questions, that, well, could it have been 120
8 or could it have been 20 degrees warmer or 30 degrees
9 warmer, do you agree with me that when you read that
10 testimony from these witnesses of course they're
11 responding in a fashion but they're just using their
12 best educated guess?

13 A I didn't form any opinion based on their
14 opinion of the temperature.

15 Q Okay.

16 A It means nothing really to me right now.

17 Q So the source of information we need to look
18 at in this case and rely is the information that's
19 available which is from the National Weather Service?

20 A That's correct, but it follows the fact that
21 I believe they failed by not getting on site
22 temperatures.

23 Q Okay.

24 A That's an important consideration.

25 Q We'll talk about that in a minute.

1 A So if you know the humidity and the
2 temperature outside then you can calculate this wet
3 bulb temperature, so that's 82.

4 The black globe, this has to be a little bit
5 of a guess, and I'm only using, remember I just read
6 to you the heat index, that it said about 15 degrees
7 Fahrenheit higher at the bottom of that sheet?

8 Q Correct. When exposed to full sunshine and
9 it says can increase up to 15 degrees.

10 A Totally agree. That's why I put sunny here
11 because I have partly sunny also.

12 Q All right.

13 A This is just an example. So this is kind of
14 worst case scenario, this particular one. So the
15 calculation comes out to be 90.4 in this circumstance.

16 Q What you've done is a weighted average of
17 each of these?

18 A Ten percent, 70 percent, 20 percent.

19 Q So ten percent ambient?

20 A Yes.

21 Q Dry bulb?

22 A Yes.

23 Q Seventy percent wet bulb, and 20 percent,
24 the radiant, which is black globe.

25 How do they do that, black globe?

1 A Good question. So that's a thermometer that
2 sits inside of a black vessel, so if it's really sunny
3 out it gets extremely hot inside that black vessel,
4 when it's cloudy, when it's cloudy outside, full cloud
5 coverage, your black globe temperature is the exact
6 same as your dry bulb temperature.

7 And then I've had days doing data collection
8 in Georgia where I've had the black globe be 35 to 40
9 degrees warmer than the regular temperature, brutal
10 hot sunshine near blacktop. So it can be done.

11 So this is 90.4 for the wet bulb globe
12 temperature, my first example, and you can go back
13 through these examples. In all of the examples this
14 puts you in an extremely stressful situation, 90.4 is
15 like cancel, make modifications, have many more rest
16 breaks, so this is an important, that's a high
17 temperature.

18 Q What does that 90.4 correlate to here in the
19 documents that you have?

20 A This gives you an example here. So wet bulb
21 globe temperature, 90 would be, for instance, here, if
22 you were doing heavy work, this is what you would do
23 if you were doing --

24 MR. COX: Keep your voice up.

25 THE COURT REPORTER: And please slow

1 down.

2 THE WITNESS: Sorry.

3 A If you were doing heavy work this is the
4 work to rest ratio you would have because you're over
5 86.

6 BY MR. SCHMITT:

7 Q Let me just stop you there so when we read
8 later and for Mr. Cox's benefit so he can follow,
9 Exhibit 44 which is the Exhibit C from an OSHA
10 technical manual, what you've done is you've looked at
11 these columns by work load, light, moderate, heavy,
12 making the assumption if the individual is doing heavy
13 work?

14 A No, it's just an example.

15 Q Oh.

16 A If you look at Jared's case, if the machine
17 was working properly that day he probably has light
18 work, and in his particular situation on his day if it
19 was malfunctioning for many hours it was probably
20 moderate work.

21 But either way I'm giving you an example,
22 it's over 90 and we're into some of the more extreme
23 things because we're at the bottom of this thing, we
24 have more rest and less work.

25 Here you can see even if it's light work or

1 if it's moderate work it's saying to have 75 percent
2 rest and 25 percent work each hour. So it gives you
3 an idea, we're in an extreme stress situation.

4 So that's one example. Let me just do a few
5 so we can kind of pull this all together.

6 Track, this is, you know from some of the
7 documents it says that it can be hotter near the
8 track, okay, so whether it be the rail causing the
9 heat, maybe the engines from the motors, from the
10 equipment, from all the metal from the equipment,
11 whatever it may be.

12 So some, there was a document, and I'll pull
13 it out if you need me to pull it out, this is I think
14 one of the examples, there are a couple of examples,
15 it says like the temperature should be, of the rail
16 should be 30 degrees Fahrenheit hotter.

17 Q What you're looking is the engineering track
18 maintenance field handbook?

19 A I think you may have given that a number
20 already somewhere.

21 Q Exhibit 37?

22 A There you go.

23 Q But what it says is that the rail
24 temperature, in other words, the temperature of the
25 steel rail will be approximately a 30 degree increase

1 on a sunny day?

2 A Yes.

3 Q But you agree with me that someone that is
4 standing let's say 20 feet away from that rail, of
5 course they're not experiencing a 30 degree increase
6 in temperature, are they?

7 A Totally agree.

8 Q Even somebody, Doctor, somebody that's
9 sitting on a machine that's up in the air and
10 isolated, insulated from the area of the rail which is
11 on the ground itself, you agree with me that an
12 operator in sitting inside of a machine that's feet
13 above the surface is not going to be exposed to a 30
14 degree increase in temperature, ambient temperature?

15 A It may not. That's the thing, the person
16 operating the machine has other environmental stresses
17 because most of those machines are all metal and that
18 metal is going to be extremely hot and they also will
19 have engines and that engine is producing heat.

20 So we don't know exactly what the
21 temperature is while he is sitting on this machine or
22 while he is potentially using a sledgehammer to put,
23 you know, to do the application of the things
24 manually.

25 But the point is is that in that small

1 environment there near the rail it's warmer than the
2 environmental conditions, we don't know the extent of
3 how much warmer. It's warmer.

4 Q Warmer than the ambient air?

5 A Correct, it's warmer than the ambient. We
6 don't know the extent. If he's ten feet in the air
7 it's probably not as much, if he's two feet above the
8 ground it's probably hotter.

9 Q And if you have breezes, wind that's
10 available that's going to provide a more rapid rate of
11 cooling, reduction in ambient --

12 A It doesn't reduce temperature.

13 Q The exposure?

14 A Yes, it could help the person though with
15 cooling.

16 Q Okay.

17 A So that's just an example, I'm only doing
18 the examples to just lay the foundation.

19 Q Yes.

20 A So what I did to be fair, I only went up 15
21 degrees because it gives an example of 30 degrees so I
22 didn't go to the extreme, I only went up 15 degrees.
23 And I did the same humidity again because it's still
24 the same outside and now the calculated wet bulb would
25 be 94 --

1 MR. COX: How much?

2 THE WITNESS: 94, and we'll get the sheet
3 to you, Jim.

4 A And then the black globe here, I just did
5 the same thing again approximately but I went with 125
6 here, that's ten degrees above this one. Here I went
7 15 degrees, it's definitely going to be warmer on a
8 full sunny day. I gave you examples where it's not
9 full sun so it doesn't go up as much.

10 But the point is is this is just an
11 extremely high number, 102.3, it's off the charts,
12 this doesn't even exist on these recommendations. So
13 this is an example of it warm if you factor in some of
14 the track heat.

15 Here I have two examples in partly sunny so
16 partly sunny brings down the extent that the black
17 globe temperature is above because remember in your
18 little chart it said it goes up 15 degrees in full sun
19 so I did half of that in partly sunny.

20 BY MR. SCHMITT:

21 Q Okay.

22 A Make sense?

23 Q When we talk about this Exhibit 12 where it
24 says in exposure to full sun what that means is that
25 the employee is exposed, is standing outside and is

1 exposed to full sunlight, full sunshine?

2 A Yes.

3 Q In other words, if that employee does not
4 have any type of protection from, for example, shade
5 from a tree, right?

6 A Yes.

7 Q Or shade from a canopy that might be on the
8 equipment that they're sitting on, right?

9 A No question.

10 Q Or even a hard hat, for example, that will
11 provide some shade?

12 A To a point, actually probably stores more
13 heat than it helps you prevent the sun but that's
14 another issue.

15 Q All right.

16 A But there's no question shade can be
17 provided by the vehicle, shade can be provided by the
18 trees, and the cloud cover might provide shade.

19 Q Even the shade, for example, if an
20 individual is sitting in a seat that won't have a back
21 rest --

22 A Yes.

23 Q -- that portion of the body is being shaded?

24 A There's no question. I'm giving you
25 examples here. Based on his testimony it sounds like

1 he was having to do more manual labor than he normally
2 does and he was out in full sun for portions of the
3 day.

4 Q How much was he actually out in full sun?

5 A I don't know if anybody has that estimate
6 but at multiple times through the day it seemed like
7 he had to get off of his machine, do manual labor, get
8 back on, get back off, so we might have to ask like
9 Jared the exact time that was spent on each of those
10 tasks.

11 Q All right. Is that significant, is that
12 important to you to know how much he actually was off
13 that machine and whether or not it was perhaps just
14 simply an infrequent occurrence because there are
15 other individual laborers who are following up behind
16 his machine to the extent there's a problem, they're
17 the ones actually applying?

18 MR. COX: Wait a minute. Form and
19 foundation.

20 A He, Jared's testimony gives an indication
21 that he had to frequently do that last process that
22 the machine was not properly doing. So I don't know
23 the exact amount.

24 The point is is that I said, I even gave
25 credit before, if he never left his vehicle it's light

1 work for the day. He was doing some labor like this
2 so I would consider it a moderate effort day.

3 BY MR. SCHMITT:

4 Q At the most?

5 A At the most, yes. But even these kind of
6 environmental conditions that we're in these still
7 require attention for light or moderate work.

8 But based on the afternoon that he describes
9 and like I did this with everybody, I assumed every
10 single person was telling the truth when they were
11 doing their deposition, every person.

12 So when Jared's testimony is that afternoon
13 that he was laboring more one than he typically does.
14 And just one thing to bring up like in the Shea
15 report, he mentioned that why did only Jared have a
16 heat illness that day.

17 Q Why was it only Jared?

18 A Yes, why was it only Jared.

19 But it makes a lot of sense, if Jared
20 doesn't normally, for two weeks he doesn't have, he's
21 not having to do all this labor, and on this
22 particular day the machine is not working properly and
23 he's doing a lot more labor than he normally does so
24 it might have went from the mild to the moderate day.

25 Plus based if you look on the previous like

1 four or five or six days this was the hottest day like
2 in the last week so you have extreme stress and you
3 have this unique work load that he hadn't had
4 previously.

5 So if we assume everything that we take at
6 face value that makes sense to me. So I did partly
7 sunny, we're still in some big conditions right here
8 in terms of WBGT, you can see this, 89 or 101.

9 What I did here also as I looked at the
10 morning temps because I know Shea made some notes that
11 he was thinking I was making the difference that it
12 was brutally hot all day which I wasn't, it's the
13 afternoon obviously is the hottest time of the day.

14 But it was still pretty hot, it's 93 degrees
15 at 11 o'clock in the morning for the dry bulb which
16 is, you know, a hot day, 47 percent humidity,
17 speculating here full sun, I mean you could obviously
18 do the same thing for partly sunny, all indications
19 were that it was either partly sunny or sunny based on
20 people's feedback. So just giving you examples here.

21 Q All right. So this WBGT that we've been
22 discussing, you said that the military and sports
23 industry, sporting athletes are beginning to adopt
24 this?

25 A And the OSHA guidelines are based on that.

1 Q Okay.

2 A So industry, military, and athletics.

3 Q Well, OSHA does not mandate that the
4 industry use the WBGT.

5 A No, I'm not saying that, I'm just giving you
6 an example of their recommendations based on this.

7 Q Well, there's a reference from OSHA in
8 Exhibit number 44, if an entity or individual wants to
9 use the WBGT, but you're not saying that OSHA is
10 requiring --

11 A I actually don't honestly know what OSHA
12 requires.

13 Q All right.

14 A I'm giving you an example of something they
15 produced and this is the gold standard, I'm going to
16 give you even an example of a couple of weeks ago.
17 FIFA, which is capital F-I-F-A, that's the governing
18 body for soccer worldwide for the Brazil World Cup
19 that's coming up, if the WBGT goes over a certain
20 level they have to insert an extra halftime into each
21 half.

22 Q Okay.

23 A I'm just saying this is the momentum of
24 medicine and science right now, it's just a better
25 tool than heat index because you don't have the

1 arbitrary factor of do I add in ten, do I add in five,
2 because when you get the environmental, you know, if
3 the training crew is working in an area that is
4 heavily shaded, if the guy who is in charge of that is
5 getting those conditions right then they might be able
6 to handle much more work because full shade might take
7 out all the effects of the sun.

8 But then when they move in, they might have
9 a three hour time of full sun, they might have to back
10 off in that time frame. It is just so arbitrary.

11 Q Certainly the type of exertional activity
12 that an athlete like a soccer player, we've all seen
13 what a soccer player does by watching an event, a lot
14 of running, maximum exertion, do you agree with me
15 that the type of exertional activity an athlete
16 undertakes is significantly more than what an average
17 worker, laborer will perform?

18 A Definitely. It just depends on what the
19 laborer is doing because there are laborers that can
20 do much higher intensity than a football player or
21 soccer player.

22 But if you're talking about specifically
23 Jared I agree with you that his typical work day I
24 would put in light load. But the one really unique
25 thing about his situation is he had a unique stress,

1 that he did a lot more labor that afternoon than he
2 was accustomed to, and if you combine that with warmer
3 conditions than he was used to it wouldn't take a
4 rocket scientist to predict that's the guy who's going
5 to have a heat problem that day because you have a
6 very unique stress for that particularly individual
7 that day.

8 Q And certainly individuals in the military
9 and in basic training and boot camp, all of the
10 activities that a military soldier will undertake
11 certainly they have more exertional activity than an
12 average laborer would, agreed?

13 A It's funny you said average laborer because
14 I just happen to know a lot of laborers that have
15 brutally hard work.

16 Q We'll talk about that in a minute but on a
17 general basis would you agree with me just the general
18 manual labor employee --

19 A It depends, because you could have a
20 construction worker, you could have a firefighter that
21 could have were higher labor than some other --

22 Q Sure, a firefighter going up and down the
23 ladder carrying heavy equipment?

24 A Just out in the mountains fighting forest
25 fires.

1 Q Sure. As far as type of work that Mr. Whitt
2 is actually performing, operating a machine, do you
3 have an understanding of what he's actually doing
4 other than what he's simply saying in his deposition
5 that he's doing, I mean -- let me stop there.

6 Do you have any understanding of what he's
7 actually doing other than what his version is as he
8 has expressed in his deposition?

9 A Jim explained to me at length in one phone
10 conversation because I asked like what is the exact
11 process of the person who does this job and that gave
12 me a better understanding and also obviously reading
13 through Jared's description.

14 Q So what did Mr. Cox tell you?

15 A Well, he kind of just went through all the
16 components of what someone has to do when he uses that
17 machine but the big part for me is what would be
18 different when the machine was dysfunctional, the fact
19 that he had to get off and, you know, three or four
20 strokes each time to get each one in to be
21 satisfactory to move on to the next one. So getting
22 out of your seat, doing that labor and getting back
23 in, and you're doing it as you're going up the line.

24 I'm not claiming it's like a soccer player
25 playing in a 100 degree temperature. But I'm just

1 saying it took it from what was very likely a
2 typically light work load for him and definitely
3 ramped it up to possibly be a moderate workday for
4 him, and then you combine it with maybe being, you
5 know, eight to ten degrees warmer than it had been on
6 previous days. And then you have, I don't know what
7 it might have been for him, maybe a ten hour shift
8 that he worked that day, you know, from 6:30 or seven
9 in the morning up to four o'clock.

10 Q You're not testifying that this WBGT is a
11 standard that is required in the rail industry, are
12 you?

13 A No. It's something I would suggest that
14 they just consider doing on site.

15 Q All right. If, for example, it's determined
16 by WBGT analysis or just otherwise by looking at the
17 weather forecast and seeing what's occurring that in
18 the event of a hotter day there should be
19 accommodations or changes made to recognize that
20 environment, is that really what you're saying?

21 A That's true. Because they do have an
22 ability to make accommodations. If they get into what
23 they consider their high heat procedures then that
24 would be when the heat index is in the red zone, so if
25 look again at Exhibit 12 --

1 Q All right.

2 A -- it's a little hard to distinguish between
3 the orange and red there but if it gets into the red
4 zone then they follow these precautions that are on
5 page 11 of Exhibit 11.

6 As an example they say take a five minute
7 break every hour, that's just one example, and I know
8 it might have been a little hard on my opinion, that
9 is an example of what I meant by grossly inadequate.
10 A five minute break within an hour under high heat
11 conditions doesn't fall in line with any of the
12 recommendations I brought here today from OSHA or the
13 military or sports.

14 Q You're talking about then compared to
15 Exhibit 12 extreme danger, the red section?

16 A Yes.

17 Q What your opinion is is that if that's all
18 that was done, only take a rest break for at least
19 five minutes every hour?

20 A I'm speaking strictly of the rest to work
21 ratio since we were kind of hovering on that topic.

22 Q Okay.

23 A That is completely insufficient under
24 extreme weather conditions. I mean, you would
25 probably, in those kind of extreme conditions you

1 would want ten minutes per 30 minutes, that's the most
2 extreme, that's the highest part of our chart.

3 Q Is that true, that you would want ten
4 minutes of rest?

5 A At least ten every 30.

6 Q Okay. At least ten minutes of rest per 30
7 minutes of work in the event according to NOAA's
8 National Weather Service heat index chart there is an
9 extreme danger, right?

10 A I'm assuming you're doing like light to
11 moderate work since we're talking about Jared's
12 situation. That would be different if you're doing
13 heavy work.

14 Q Okay.

15 A So we're nowhere near what actually, I mean,
16 this recommendation is just inadequate, five minutes
17 per hour in extreme danger situations.

18 Q What is your source, we probably marked it
19 but if you can identify for me what is your source for
20 your opinion that the rest break should have been ten
21 minutes every 30 minutes?

22 A Well, part of it is my own knowledge, I
23 mean, as an expert, plus Exhibits 44, 49.

24 MR. COX: Tell me what 44 is.

25 MR. SCHMITT: That's Appendix C from

1 OSHA.

2 A Exhibit 49 which is the one I mentioned from
3 the military before. Exhibit 50 which is from the
4 ACSM. And Exhibit 51 which is from the Georgia High
5 School one. Those are just examples, we can get many
6 more.

7 BY MR. SCHMITT:

8 Q Okay. If Union Pacific had in fact had a
9 procedure where employees were taking a ten minute
10 rest break for every 30 minutes of work and if
11 Mr. Whitt had done that what would have been the
12 outcome?

13 A There's lot of benefits to having longer
14 break periods. One, it gives you a chance for your
15 body temperature to come down while you're not
16 working; second, it gives you a chance to have more
17 time to hydrate which could optimize someone's
18 hydration status during the course of the day.

19 So those are -- the biggest reason is you're
20 keeping the person's temperature down because now
21 you're resting for 20 minutes out of that hour.

22 Q In your opinion would it have made any
23 difference in regards to Mr. Whitt?

24 A It absolutely could have prevented a heat
25 stroke from taking place.

1 Q When you say could have meaning that it's
2 possible it could have and possible it may not have
3 made any difference?

4 A I believe it's likely the heat stroke would
5 have been prevented.

6 Q Okay. Is it important -- well, before I get
7 to that, are there any other, I guess we were on the
8 topic of --

9 A Was kind of work to rest ratio, the high
10 heat procedures because I thought it was inadequate,
11 the work to rest ratios --

12 THE COURT REPORTER: I really can't even
13 understand you.

14 THE WITNESS: Sorry. It's my fault.

15 A We were on the topic of work to rest ratios,
16 so that's why I got to the high heat procedures which
17 is part of Exhibit 11 because I felt that those were
18 inadequate.

19 And if you look at the charts here you have
20 like what was that particular day in the afternoon so
21 if you went to down from 99 degrees and you said 45
22 percent humidity, we're definitely in orange but we
23 could easily be in red if you factor in the sun, the
24 black globe part of it or if you factor in the heat of
25 the rail.

1 So either of the things that cause people to
2 kick this up a notch you would easily be in the red
3 zone of this. And I think that they thought they were
4 like they had an extreme danger day from some of the
5 testimony that I was getting from some of the
6 supervisors.

7 BY MR. SCHMITT:

8 Q Well, then if we base it on the evidence
9 that we know of, a 99 degree day at 45 percent
10 temperature --

11 A Right.

12 Q -- or humidity, excuse me.

13 A But you have to go 99 plus 15 because It's
14 telling you to add in 15 on sunny days.

15 Q For a person that's in full sunshine?

16 A But the full sun also affects of everything
17 around you, that's why that calculation is there, it
18 makes your vehicle hotter, it makes the rail hotter,
19 it makes the ground hotter.

20 A lot of the heat you're getting is actually
21 being reflected from the ground so even though the top
22 is covering you you're getting the effect of the sun
23 from its reflection from the ground.

24 Q But to be fair this is a document published
25 by the government, OSHA, right?

1 A Yes.

2 Q And what it's saying is that exposure to
3 full sunshine, so someone that is not exposed to full
4 sunshine is not going to be, you do not need to
5 increase this heat index value by 15 degrees
6 Fahrenheit, correct?

7 A That's why I tried to give you examples
8 before to give you the benefit of the doubt.

9 Q That's fine.

10 A Let's just say half it of so
11 seven-and-a-half.

12 Q And of course this document says up to 15
13 degrees, I mean, it doesn't say --

14 A And I just gave an example, it could go up
15 30 or 40.

16 Q Well, it could be one degree?

17 A There's no question.

18 Q Okay.

19 A If it was a sunny day out it is affecting
20 the entire thermal load.

21 Q And certainly you believe OSHA would have
22 been aware and taken that into consideration when it's
23 authored in this document, right?

24 A I already mentioned that heat index is an
25 inferior method, that's why you use WBGT because you

1 then don't ever have to predict this.

2 Q Well, certainly Exhibit 12 is a document
3 that's, heat index is a document that was published by
4 OSHA?

5 A I know. That's why I'm explaining to you
6 that they have also OSHA recommendations for WBGT.

7 Q All right.

8 A I'm just saying if I were made the boss
9 tomorrow I would say we're not going to use heat index
10 anymore.

11 Q Okay.

12 A We're going to use WBGT.

13 Q What percentage of the industry in general
14 uses WBGT?

15 A I don't think there's a study that's been
16 published that I could tell you that.

17 Q Would you agree with me that it's probably
18 in the significant minority?

19 A I know the military uses it.

20 Q Sure.

21 A And sports is moving towards it a lot and
22 like all those firefighter situations, they use it.

23 Q Any other industry that you know of that's
24 using it, other than what you've just mentioned,
25 military, sports and firefighters?

1 A What is OSHA suggesting they use this for in
2 this circumstance?

3 Q I'm asking.

4 A I don't know.

5 Q Okay.

6 A I'm here as the expert to tell you what's
7 the best thing to take care of the employees.

8 Q Okay.

9 A But even if you, even if you said it wasn't
10 sunny out you're still in the orange zone here and we
11 haven't factored in the heat of the rails and the
12 possibility of it being sunny outside, even if you
13 were in the orange five minutes per hour is not
14 enough.

15 Q Let's talk about that. If you're in the
16 orange of the OSHA's heat index which is titled using
17 the heat index, a guide for employers, so an employer
18 being guided by OSHA, if you have using the criteria
19 that OSHA is showing, temperature, humidity that is in
20 the danger, what should be done in that situation?

21 A You would probably have, the other one is 20
22 minutes break in an hour, you would probably have ten
23 minutes break in an hour if it's light or moderate.

24 Q Okay.

25 MR. COX: What was that answer?

1 THE WITNESS: You would have at least ten
2 minutes if it was light or moderate work.

3 BY MR. SCHMITT:

4 Q Per hour?

5 A Per hour. So I would probably say like ten
6 to 15 minutes, and the other one would probably be 20
7 to 25 minutes if you were in the red.

8 Q But we're talking about the category of
9 danger?

10 A Right, like I said if it was orange I would
11 probably say it would be ten to 15 minutes you would
12 not be exercising each hour.

13 Q So ten to 15 minutes of rest, what's the
14 source and the basis for that opinion, that it would
15 be ten to 15 minutes?

16 A All the same ones I just said before because
17 they all go into this range as well.

18 Q But the sources that we're talking about are
19 sources from military, from sporting events, and then

20 --

21 A OSHA.

22 Q Well --

23 A We can get a lot of other industry
24 guidelines for WBGT.

25 Q I'm just asking for your opinion, what the

1 source is of it?

2 A That would be the same numbers that I gave
3 you for the high heat danger. For the extreme danger
4 it would be the same as danger.

5 Q What would be the same for danger as it is
6 for extreme danger, oh, the sources?

7 A Yes.

8 Q Okay. That we've already discussed?

9 A Same exhibit numbers.

10 Q All right. Any other bases or opinions,
11 Doctor, in regards to this heat to rest ratio that we
12 haven't talked about?

13 A I don't know. That was one of the big
14 factors that I wanted to discuss.

15 Q Okay. As far as what was being done that
16 day and you said that by way of heat to rest ratio,
17 and you've expressed your opinion, is it also a good
18 practice for employers to, for example, reduce work
19 load, accommodate work load when it's going to be
20 hotter that day or being up higher?

21 A That's the whole point of this is to have
22 less time that you're exercising in the day when it's
23 hotter outside.

24 Q All right.

25 A That's why I just said their guidelines of

1 five minutes per hour in the extreme danger is
2 extremely dangerous recommendation to have people only
3 have five minutes off each hour.

4 Q Well, but the directive actually was that it
5 was a mandatory five minute break every hour, you
6 understand that?

7 A That what's really inadequate, five minutes
8 isn't enough time.

9 Q Was Union Pacific's directive that every
10 employee also take rest breaks whenever that employee
11 wanted to, was that a good practice?

12 A Yes.

13 Q Was it a good practice of Union Pacific to
14 direct all of its employees including Mr. Whitt to
15 drink plenty of water?

16 A Yes.

17 Q Was it a good practice for Union Pacific to
18 have provided Mr. Whitt and its employees with all the
19 water that they wanted to drink?

20 A Yes.

21 Q Was it a good practice of Union Pacific to
22 instruct Mr. Whitt to go into the cooling station and
23 cool down whenever he felt that he wanted to?

24 A Yes.

25 MR. COX: Foundation.

1 BY MR. SCHMITT:

2 Q Was it a good practice of Union Pacific to
3 direct Mr. Whitt to go into any of the air conditioned
4 trucks that were being positioned throughout the work
5 area whenever he wanted to?

6 A Yes.

7 MR. COX: Foundation.

8 A I was focused on that one item. The bosses
9 should make specific modifications based on the
10 environmental conditions to protect the workers, the
11 work to rest ratio.

12 BY MR. SCHMITT:

13 Q So all these other practices were good
14 practices but in your opinion the other thing that
15 should have been done is there should have been
16 regardless of telling an employee take a rest break
17 whenever you want and for however long you want, Union
18 Pacific should have mandated that it be at least ten
19 minutes, ten to 15 minutes per hour?

20 A Absolutely. The supervisors have to take
21 control because the workers might not feel comfortable
22 taking a break, a directive is different, if they are
23 told they have to stop and have certain rest breaks
24 that's definitely a much better way of protecting
25 them.

1 Q Well, but now you're interjecting a
2 subjective guess, really, what workers thought or may
3 thing or don't think?

4 A That's based on my experience, everyone is
5 going, for instance, everyone can interpret how
6 they're feeling differently. For instance, a lot of
7 people who have heat stroke do not have warning signs
8 beforehand. Okay.

9 One of the things that Shea had brought up
10 in his thing, that he should have early warning signs,
11 Jared's fault for not stopping, on page nine. That's
12 clearly somebody who just doesn't understand heat
13 stroke because a lot of people have heat stroke, the
14 first time they realize it's a problem is when their
15 face is on the ground and they're unconscious. They
16 have no warning signs beforehand.

17 So you can't just rely on your workers
18 feeling like I need a break, I don't need a break, you
19 have to have a directive to protect them with the
20 breaks so that you can prevent that from happening in
21 the first place.

22 Q But isn't an individual, the individual
23 employee is the person most knowledgeable about his or
24 her own body?

25 A There's no question but you have to

1 understand in heat stroke not everyone has an early
2 warning sign.

3 Q Okay.

4 A By having the rest break you protect that
5 from happening because you are getting their
6 temperature down automatically over the set period of
7 time.

8 Q Well, is heat stroke, is there a progression
9 of heat related illnesses, in other words, does it
10 progress from I'm a little hot versus as we go up the
11 scale?

12 A That's a great question. That's one of the
13 great misnomers, it's like someone is going to have a
14 more mild heat situation before they have a heat
15 stroke and that's completely not true.

16 You could have an exertional heat stroke and
17 be unconscious and never have had a heat cramp or heat
18 syncope or heat exhaustion beforehand.

19 When I was 16 I suffered a heat stroke
20 myself running in a race and besides for just, I was
21 running the best race in my life and besides for being
22 really thirty because it was the last lap of a 25 lap
23 race and feeling warm but it was really hot outside
24 and you always feel warm when it's really hot outside
25 I collapsed unconscious on the track.

1 So I didn't have any indication before that
2 I was, that something was wrong with me, and that
3 happens in a lot of heat stroke cases.

4 Q What percentage of heat stroke cases will an
5 individual experience no signs or symptoms before they
6 suffer the heat stroke?

7 A That's a great question. It's something
8 from the science perspective, we would love to really
9 understand that better. A couple of studies that have
10 looked at that said about 50 percent of people don't
11 have any prodromal signs and symptoms before heat
12 stroke.

13 Q Prodromal?

14 A Prodromal is just something you feel
15 beforehand.

16 Q And 50 percent of individuals suffering heat
17 stroke have no signs or symptoms before?

18 A Nothing that made them indicate it was a
19 heat stroke, nothing different than a normal exercise
20 session in the heat. Do you know what I mean?

21 Q Sure. We've all worked outside or exercised
22 --

23 A Nothing that triggers that person to think
24 that this is different or it's a heat stroke.

25 I have to really follow up that statement.

1 The problem is with that is I don't
2 completely believe that number, it might be lower than
3 50, the reason is is that people who have a heat
4 stroke and die, we don't get a chance to ask them if
5 they have prodromal sign or symptom so we lose that
6 data plan, does that make sense, you know, because
7 obviously they lose that opportunity.

8 So the most extreme cases, the ones that are
9 most likely to die, they might have had the prodromal
10 symptoms but we'll never know.

11 But the take home message is that
12 supervisors who can consult with the experts in
13 industry and in medicine need to give the directive to
14 their employees about what is an appropriate work to
15 rest ratio in a work environment and then have the
16 appropriate work guideline in place like one of these
17 and then you also say to them, you know what, if
18 you're not feeling well you can still take breaks in
19 addition to these, it's up to you.

20 But we're going to definitely protect you
21 for these number of minutes during these hot
22 conditions because we know sometimes that heat stroke
23 might present and the person might not be able to
24 prevent it.

25 Q But even in your situation with the heat

1 stroke you felt hot before you suffered it?

2 A There's no question. But in every race I've
3 run in the heat in my life before or since I also felt
4 really hot, running hot weather races.

5 So there wasn't something like I was, you
6 know, I had a severe headache or severe dizziness or
7 something was, you know, I did feel oppressively hot
8 but I have felt oppressively hot in my running life
9 running in the summertime.

10 But the point is even will the employee
11 always be able to interpret the seriousness of signs
12 and symptoms, you know what I mean, we can't assume
13 that they're all going to have that high level of
14 knowledge like, oh, this is something I need to be
15 worried about.

16 That's just a good work to rest ratio. As I
17 mentioned before, remember the intensity and
18 environmental conditions are the two key factors that
19 drive temperature up.

20 So with good work to rest ratios we take
21 both of those into account on the same policy because,
22 one, we're making modifications of the amount of work
23 they're going to do based on the environmental
24 conditions. So it's very, very protective.

25 I mentioned there's other factors that drive

1 temperature up, and one is hydration, and I believe
2 they did a great job of keeping him hydrated; another
3 is equipment or uniform, and I believe that was not an
4 issue in this particular case really; one is heat
5 acclimatization.

6 Q You have no issues, no concerns or
7 criticisms about that?

8 A He had been exercising in, you know, pretty
9 moderate heat in the weeks leading up to that so he
10 was probably in a pretty good situation, the thing
11 that was unique is he may have had a new stress that
12 day because he was doing more labor than usual so he
13 might not have been acclimatized for that, but overall
14 I feel like he was ready to exercise in the heat.

15 Q You felt that Union Pacific's conduct in
16 this case in regards to Mr. Whitt specifically in
17 regards to heat acclimatization was appropriate?

18 A Yes.

19 Q Okay.

20 A So that's why I didn't criticize. They have
21 a heat acclimatization policy in the high heat
22 guidelines.

23 Q Okay.

24 A You didn't hear me say anything about
25 hydration, I felt it was fine.

1 Q Oaky.

2 A So I think I hit five there, right, because
3 equipment, heat acclimatization, hydration, intensity,
4 and environmental conditions. Those are five so far.

5 Q Okay.

6 A The other one is just something we call
7 individual factors that can affect someone's heat
8 tolerance and, for example, that could be like
9 medications they're on, it could be if they're sick
10 that particular day, it could be previous history of
11 heat illnesses, so I don't think that was an issue in
12 this particular case at all.

13 Q Okay.

14 A I don't think he brought anything to the
15 table that changed his susceptibility that day for
16 heat illnesses.

17 Q All right. Is it better for an individual
18 to adapt to the heat, for example, to eat fruits and
19 vegetables rather than let's say double cheeseburgers?

20 A First of all, no one has ever done a study
21 to prove that one way or the other.

22 The double cheeseburger would never be a
23 hinderance to someone exercising in the heat if
24 they're hydrating properly. You can still drink
25 plenty of water and still have your double

1 cheeseburgers.

2 Q Okay.

3 A And that would not change your risk. If you
4 tell me he's having double cheeseburgers and not
5 having any fluids then that's the risk, but just
6 because you're having double cheeseburgers that
7 doesn't change your risk profile for heat stroke. You
8 could have double cheeseburgers and then have a water
9 bottle next to you all day and be totally fine.

10 Q Was it a good practice that Union Pacific
11 was following that day in providing fruits and
12 vegetables, making those available for the employees
13 there working?

14 A Yes.

15 Q Was it also a good practice of Union Pacific
16 that it advised Mr. Whitt and all of the employees to
17 be watching out for each other and observe each other
18 and what they're doing?

19 A Yes. I definitely like the idea of the
20 buddy system, I'm not sure if it was like tightly in
21 place for Jared's case in this particular situation.
22 I don't know if anyone could identify who his buddy
23 was on that particular day.

24 Q Well, but there were managers --

25 A I'm not saying there weren't people who

1 crossed paths with him during the course of the day
2 and kept checking up on him.

3 Q But was it a good practice?

4 A We're not making any claim here that, I
5 guess I get the sense that Union Pacific cares about
6 its employees. I'm just saying, you asked me what I
7 would do to enhance the situation.

8 There's three key focus items: One is I
9 definitely would have work to rest ratios based on
10 environmental conditions, that's just kind of a gold
11 standard; second is I would have a plan in place to
12 aggressively treat heat stroke whether it be you're
13 transporting the person or you're cooling them on
14 site.

15 Q Okay.

16 A Like we say before if you're 100 miles from
17 a hospital you're cooling on site, if you're one mile
18 from the hospital you're taking him to the hospital,
19 so you have to have a plan that makes sense.

20 Q That's item number two because now you're
21 giving me --

22 A Global.

23 Q -- these are overall your global opinions:
24 Number one, the work to rest ratios which we have
25 discussed; number two, adequately treating heat stroke

1 as you've just discussed?

2 A And third without question the item that a
3 supervisor should never overrule a colleague who's
4 caring for somebody who's on site who recognizes that
5 something is serious.

6 So I'm not pointing blame as a global thing
7 for Union Pacific, like I like their focus on
8 hydration, I like their focus on that people thought
9 that this might be a day that there might be a risk,
10 they were thinking of it, so there were things that
11 were in place but there are things that I think put
12 Jared in particular risk on those three particular
13 items.

14 Q Let's talk about the third one. The first
15 two are certainly within your expertise?

16 A Yes, we have covered that, right.

17 Q But this third one now that you've
18 interjected, and I guess this is maybe the remaining
19 area of the report talking about supervisors should
20 never overrule a colleague?

21 A That just related to a heat stroke.

22 Q Okay.

23 A Because the heat stroke case like because if
24 they're not on site the person who is there has to be
25 the one who you believe, not the victim, do you know

1 what I'm saying.

2 So you have to rely on the person who's
3 cognizant and conscious and taking care of this other
4 person, you have to rely on that person's intuition
5 and their opinions.

6 Like if you were driving me in a car to the
7 hospital because you said, Doug, you don't look good,
8 and you were taking care of me and you said, I'm
9 taking you to the hospital, if your boss called you
10 and said, put Doug on the phone, like after we had
11 this conversation you would know I'm not putting Doug
12 on the phone, like I am going to decide that I need to
13 go to the hospital.

14 I learned from a heat stroke expert today
15 that their opinion when they're in a crisis situation
16 we're not going to heed them, we're going to go on my
17 intuition. So that's something that just globally you
18 would not want to rely on a heat stroke victim's
19 opinion in that situation.

20 Q But you're assuming there that it is in fact
21 a heat stroke victim?

22 A I agree.

23 Q But let's assume it's somebody that's just
24 overheated?

25 A Just in this particular case David felt that

1 there may have been a heat illness present and there
2 may have been a heart issue. In those two
3 circumstances his ability to sense this was much
4 better than somebody in a remote location.

5 There are times where a supervisor should
6 overrule somebody, like if someone says, I'm driving
7 to the hospital and the supervisor says, the hospital
8 is 100 miles and you have an AED one mile behind you
9 and the person might be having a heart attack,
10 supervisor tells him to turn around and go where the
11 AED is. That's makes sense.

12 But in a heat stroke situation like this you
13 would want to rely on the person who's there, just
14 like the example I just gave you. If you were
15 transporting me I would want you to make the decision
16 for my care, not me make the decision as me the person
17 who may be suffering from a heat stroke.

18 Q Well, and I understand your earlier
19 testimony saying that you should not have relied on
20 Jared Whitt's request to go back to the cooling
21 station, correct?

22 A Yes.

23 Q All right. Do you have any other opinions
24 or bases for opinions on this issue?

25 A No, I've hit my big global items.

1 Q All right. Continuing with your report then
2 where we left off as I'm looking we have talked about
3 consideration three, right?

4 A Yes.

5 Q Is there anything else about consideration
6 three that we haven't discussed?

7 A No.

8 Q Consideration four, do you have any, up to
9 the point where you're citing Federal Railroad
10 Administrative regulations, we'll talk about that
11 separate, but let's talk about specifically heat
12 issues and --

13 A One and two we definitely covered already.

14 Q Okay.

15 A Three was just me commenting on that, there
16 was something about dry, hot skin in one of the Union
17 Pacific materials and that we don't ever tell people
18 that for heat stroke anymore.

19 Q Well, some publications including from OSHA
20 still make that reference, agreed?

21 A I don't disagree. I'm just trying to tell
22 you that everybody should have it out of their
23 materials.

24 Q That would be your recommendation?

25 A In medicine everyone is suggesting taking it

1 out, not just Doug.

2 Q Even though OSHA doesn't take it out, so
3 OSHA is doing something different than what you're
4 recommending, agreed?

5 A That is true. We need to get OSHA to
6 change.

7 Q Go ahead and continue.

8 A I think we covered the rest of that stuff
9 with the treatment there.

10 I already mentioned to you that I believe
11 that the heat index should have been, you know, done
12 through the day on site.

13 Q Okay.

14 A Number two there on that page five talks
15 about I didn't think the five minute break was
16 sufficient, we talked about that earlier.

17 Down below it talks about the buddy system,
18 I wasn't positive that was in place for Jared that
19 day.

20 Q But if in fact co-workers were there and did
21 check up on Jared during the day and if we assume that
22 that occurred then you agree with me, you wouldn't
23 have any criticisms about Union Pacific's buddy system
24 and the fact that it --

25 MR. COX: Form and foundation.

1 BY MR. SCHMITT:

2 Q -- that it implemented the buddy system that
3 it did that day, agreed?

4 A I think it comes down to, I think the letter
5 of the law kind of for a buddy system is you have
6 somebody assigned to you.

7 I think what you're speaking of which I do
8 think took place was that he had supervision, like
9 people were looking out for him.

10 But I don't think there was like a -- when
11 people talk about having a buddy system in industry or
12 like in the military it's like I'm looking out for
13 Mike and Mike is looking at out for Jack, do you know
14 what I mean.

15 Q Do you agree with me though in that scenario
16 it's usually somebody that is working right next to
17 you?

18 A No, agreed. So he might not have had
19 someone that has the job that he would be right next
20 to him.

21 Q So when you have people that are spread out
22 somewhat on different machines, other people working
23 through the area, safety captains, circulating through
24 the area and certainly stopping then by each
25 individual employee, that's a good practice?

1 A As long as it happens frequently.

2 Q Okay. Define frequently.

3 MR. COX: Form and foundation.

4 A If someone is going to be, have a chance to
5 interact with someone like every ten to 15 minutes,
6 you know, just checking up on them.

7 BY MR. SCHMITT:

8 Q You're saying every ten to 15 minutes
9 somebody should stop by and check --

10 A No, just have the ability to know, let's
11 just say something does goes wrong, is it going to be
12 an hour before someone passes by again, do you have
13 them like in a visual line of sight?

14 Q So a visual line of sight would be
15 acceptable?

16 A You don't want to go like an hour without
17 having contact with someone.

18 Q So as long as you're at least in the visual
19 line of sight?

20 A Yes, see what Jared is doing, the machine is
21 still going, he's still working.

22 Q That would satisfy your opinion on what
23 should be --

24 A I would want to occasionally have
25 interaction verbally with the person, you know, you

1 stop by every 30 to 60 minutes, do you have enough
2 water, do you feel okay, you know.

3 Q If we assume that that occurred, that there
4 was personal contact throughout the day as well as
5 visual observations that could be made at any time
6 then in your opinion Union Pacific provided an
7 appropriate buddy system, if that occurred?

8 A I think there might have been you could say
9 appropriate supervision throughout the day, I just
10 don't know how long he was laying down for before he
11 started to get tired, I don't think there's anything
12 in the testimony so we know that.

13 Q About how long he was lying down before
14 someone came to him?

15 A Before he got transported away, like how
16 many minutes was he actually laying down for.

17 Q Do you have any evidence that you're
18 critical of Union --

19 A No, I'm just saying I don't know.

20 Q Okay.

21 A Like you could tell me he was down for three
22 minutes, he might have been down for eight minutes, I
23 don't know.

24 Q So there's nothing that you're aware of that
25 you're critical of in that respect?

1 A No.

2 Q Okay. Any other opinions, have we talked
3 about all your opinions, bases for your opinions up to
4 this point before we start reading federal
5 regulations?

6 A I think so, yes.

7 Q Okay. Now, let's talk about those. First
8 of all, you cited Federal Railroad Administration
9 internal control plan; you've also cited a federal
10 statute, the Federal Railroad Safety Act, right?

11 A Yes.

12 Q First of all, have you been employed by the
13 FRA?

14 A No.

15 Q I think I may have asked you that earlier.

16 A No.

17 Q You're not a lawyer?

18 A No.

19 Q And I'm not trying to be, I don't know,
20 what's the term, but as I'm reading your report I
21 understand the fact that you're rendering some
22 opinions about some heat issues --

23 A I think the take home message here is just
24 anything that is related to how medical care should be
25 not interfered with. So you know already know my

1 opinion was that his medical care should not have been
2 interfered with by the supervisor when David was
3 taking care of him.

4 Q When you say it was interfered with by the
5 supervisor tell me what you mean.

6 A David wanted to take him to the hospital.

7 Q Because David Birt thought he was having a
8 heart attack?

9 A And he also thought he was having heat
10 issues from that day.

11 Q Well, that the heart attack was related to
12 the whatever heat issues?

13 A Yes, I think David mentioned that there
14 might have been a heat illness, there might be a heart
15 issue.

16 Q All right.

17 A David's goals were, David wanted to take him
18 to the hospital, and after the supervisor called that
19 was reversed.

20 Q In your opinion that just shouldn't have
21 occurred, I mean, regardless of whatever the
22 supervisor is that's there, whatever decision or
23 thought that that supervisor had, that's what should
24 be done without anybody above questioning it or doing
25 anything by way of getting information or discussion,

1 conversation?

2 A I have no problem with the supervisor
3 calling but if David says I'm worried about a heart
4 attack or a heart issue and I'm worried about a
5 potential heat illness or a serious heat illness no
6 one should ever offer an opinion from a remote site
7 that would potentially -- it's not like saying take
8 him to this hospital or call an ambulance right from
9 that spot or we have a doctor back at the cooling
10 situation, he's not offering an alternative medical
11 care, he reversed him from any medical care, he
12 eliminated medical care because there was no medical
13 person back at the cooling station.

14 Q Well, but the way it was reversed here, do
15 you agree with me the reason that they didn't continue
16 on to the hospital, at least according to the
17 testimony from everybody that was there is that Jared
18 made the statement, made the decision, made the
19 statement that he didn't want to go to the hospital,
20 that he wanted to go to the cooling tent?

21 MR. COX: Form and foundation.

22 BY MR. SCHMITT:

23 Q Agreed?

24 A I agree that Jared may have said that. But
25 we already talked about that, heat stroke victims

1 can't get into that, and David had the belief in his
2 heart that he should take this guy to the hospital, he
3 was doing that, and David even admits a couple of days
4 that I should have taken him to the hospital, like he
5 knows in his gut that that was the right thing to do.

6 I'm just saying a person calling from a
7 remote site, I can't even imagine, if I ever called
8 someone up driving to a hospital and I said I think
9 the guy I'm taking to the hospital right now might be
10 having a heart attack, I would never tell the person
11 driving the person to the hospital to stop driving
12 him.

13 Q Right. All right. You've told me about all
14 of your reasons and bases for that opinion?

15 A Yes.

16 Q Let's just talk about specifically your
17 citing to CFR, Code of Federal Regulation internal
18 control plan. First of all, is it fair to say all
19 you're doing is simply repeating what the regulation
20 says in your report?

21 A Yes. I just said that, obviously I'm not a
22 lawyer but I was thinking that they did not follow the
23 recommendation of this internal control plan.

24 Q But whether or not Union Pacific did or did
25 not follow any recommendation of an internal control

1 plan all you're doing, isn't it fair to say that all
2 you're doing is you're just looking at the facts and
3 just trying to in your mind apply whatever the facts
4 are to what the language says in the statute?

5 A Yes.

6 Q You're not applying any type of scientific
7 methodology to that analysis, are you?

8 A Well, I made mention already that anything
9 that increased the amount of time that Jared was
10 hyperthermic could affect his outcome.

11 Q I understand that. Let me just be quite
12 honest and frank.

13 A Yes.

14 Q Trying to render opinions about whether or
15 not Union Pacific violated federal statutes or federal
16 regulations, I'm trying to find out what is your
17 expertise and basis to render those types of opinions.

18 I understand and you've made yourself very
19 clear that certain things should have been done or
20 shouldn't have been done based on your opinion as to
21 industry standards and practices.

22 A Right.

23 Q It's a whole different issue to now say that
24 Union Pacific violated a federal law, I mean, this CFR
25 regulation, this Federal Railroad Safety Act, that's

1 going a little bit further. Do you understand the
2 distinction that I'm making here?

3 MR. COX: Form and foundation.

4 A Obviously it's a big difference for you I
5 can tell. I'm not, I just took the exact words and
6 considered this particular case in relation to that
7 language.

8 BY MR. SCHMITT:

9 Q That's the extent of your analysis, correct?

10 A This particular case, I mean, I think I was
11 very consistent through the documents that, you know,
12 I was critical of how the medical care was provided.

13 Q But by way of you're saying a violation of
14 the statutes occurred --

15 A I maybe don't understand the statute well
16 enough to know if it was violated or not.

17 Q All right. In fact it's Federal Railroad
18 Safety Act 49 USC Section 20109, did you even see
19 that, ever even read that statute before this case?

20 A I don't want to say because in the previous
21 cases I may have seen that.

22 Q But you don't remember seeing it sitting
23 here today, I understand it's subject to confirmation
24 by looking, but just sitting here?

25 A I wasn't familiar with it when I was reading

1 this like a couple of months ago but I may have seen
2 it previously.

3 Q Okay.

4 A That might have been shared with me in
5 previous documents.

6 Q So staying with the Code of Federal
7 Regulation all you're doing is you're just simply
8 reading it and based on these facts as I understand
9 them either this was complied with or it wasn't
10 complied with, is that right?

11 A Yes.

12 Q That's the extent of any scientific
13 methodology that you applied?

14 A Yes.

15 Q I mean, you agree with me that really that
16 type of analysis of whether or not that CFR was
17 violated or whether or not that Federal Railroad
18 Safety Act was violated, that's no different than what
19 a juror would be able to do, they're going to have the
20 facts, they can read the statute and the juror can
21 make the decision on their own whether or not either
22 one of those were violated or complied with. Agreed?

23 MR. COX: Form and foundation.

24 A Yes.

25

1 BY MR. SCHMITT:

2 Q But --

3 A I think we hit all the key items.

4 Q Fair enough. Same by way of the, you cite
5 to the GCOR, General Code of Operating Rules, and
6 Union Pacific maintenance of way rules, again is that
7 the extent of your analysis is simply just reading
8 what the rule says and then making a judgment call as
9 to whether or not based on these facts that rule was
10 or was not complied with?

11 A Yes.

12 Q And a juror sitting there can make as equal
13 of an assessment as you can in that respect?

14 MR. COX: Form and foundation.

15 A They may not have my background obviously
16 for the medical side of it.

17 BY MR. SCHMITT:

18 Q I understand that.

19 A But they can form their own opinion based on
20 language as well.

21 Q Right. Doctor, is there anything else in
22 your report, we have got some additional
23 considerations --

24 A No, that's just reiterated, we covered them
25 all already.

1 Q All right. Do you have any opinions or
2 bases for your opinions that you intend to reenter in
3 this case that we have not already talked about here
4 today?

5 A Not unless brand new information became
6 available to me. Based on everything I have up to
7 this point we have done a very exhaustive job of
8 covering it.

9 MR. SCHMITT: Okay. That's all I have.

10 Thank you very much.

11 THE WITNESS: All right.

12 CROSS EXAMINATION

13 BY MR. COX:

14 Q Dr. Casa, can you hear me all right?

15 A Yes.

16 Q Did the delay in getting Jared Whitt to the
17 hospital cause or contribute to a greater injury as a
18 result of the exposure to the heat?

19 MR. SCHMITT: Form, foundation.

20 A I do believe that the delay in his care
21 affected the outcome.

22 BY MR. COX:

23 Q How?

24 A Because the amount of time that he was
25 overheated or hyperthermic influenced the severity of

1 the exertional heat stroke that he suffered and
2 affected the things that he struggled with in the
3 days, weeks that followed and even potentially up to
4 his current condition.

5 Q That's the question we don't have an answer
6 to yet, is whether or not his heat tolerance has been
7 affected?

8 A That is correct. As noted earlier that's
9 something I think that people should consider
10 pursuing.

11 Q Did the delay in getting Jared Whitt to the
12 hospital cause or contribute to his delay in his
13 recovery from the heat stroke?

14 MR. SCHMITT: Form, foundation.

15 A Yes, because I think they're related to each
16 other, the recovery is directly related to the
17 severity of the condition that happens acutely.

18 BY MR. COX:

19 Q Is it true that one who suffers a heat
20 stroke has an increased susceptibility to subsequent
21 heat injury?

22 A That's a really good question. If a person
23 is not treated properly, yes, the evidence indicates
24 they might be at a greater risk for having heat
25 illnesses in the future.

1 Q Just let me look at my notes. Hang on a
2 second.

3 A Okay.

4 (Pause.)

5 Q Do I understand your opinion to be within a
6 reasonable probability that at the time of Mr. Whitt's
7 mild heat stroke his temperature was in the 105 to 106
8 degree range?

9 MR. SCHMITT: Form, foundation.

10 A I would say it was at least 105, I don't
11 want to say for sure but most likely it was probably
12 somewhere between 105 and 106.

13 BY MR. COX:

14 Q It's your opinion that he was in that 30 to
15 60 minute window -- what is your opinion about the 30
16 to 60 minute window for one that is in the 105 --

17 THE COURT REPORTER: I can't hear him.

18 A He said what's your opinion on if someone is
19 in the 30 to 60 minute window.

20 THE WITNESS: Is that what you said, Jim?

21 MR. COX: Yes.

22 BY MR. COX:

23 Q Where was Mr. Whitt in that window at that
24 temperature?

25 MR. SCHMITT: Form, foundation.

1 A Given how he was feeling later that day and
2 in the days and the week after I believe that he was
3 in the 30 to 60 minute window because we don't see
4 that kind of response if someone is cooled in the zero
5 to 30 minute window, those people tend to do much
6 better in the days after the condition presents
7 itself.

8 BY MR. COX:

9 Q Explain again if you would that 30 to 60
10 minute window, window for what?

11 A That's the amount of time that the person is
12 above like the threshold for cell damage that some
13 people speculate is around 105 or so.

14 Q Could you clarify for us your opinion based
15 on your education, training and experience as to
16 whether or not the heat stroke and all of the signs
17 and symptoms that Mr. Whitt described and demonstrated
18 to witnesses caused or contributed to the underlying
19 injury and its sequelae today of continuing numbness
20 and tingling, pain and weakness in his left arm?

21 MR. SCHMITT: Form, foundation.

22 A I definitely think that they could have been
23 related because of the contractures and the numbness
24 and tingling that he experienced during the heat
25 stroke could be related to what he's currently

1 experiencing.

2 BY MR. COX:

3 Q That opinion is based on your education,
4 training and experience more than likely than not?

5 A Yes.

6 MR. SCHMITT: Same objections.

7 BY MR. COX:

8 Q Do you have an opinion as to whether or not
9 the delay in the treatment, the delay of getting him
10 to the hospital caused or contributed to an
11 exacerbation of that underlying injury and the
12 symptoms that continue in his left arm?

13 MR. SCHMITT: Same objections.

14 A Yes, I do believe it could have exacerbated
15 it because if he had gone immediately into the
16 hospital the physicians at the hospital might have
17 given him pharmaceutical intervention to stop the
18 contractures or at least decreased the severity of it.

19 BY MR. COX:

20 Q In terms of what Union Pacific Railroad
21 could have been done to prevent this heat injury to
22 Mr. Whitt did I understand you to recommend that they
23 monitor if possible the heat conditions at the job
24 site rather than relying on National Weather Service
25 or other information?

1 A Yes.

2 MR. SCHMITT: Form.

3 A The two biggest things that I would
4 recommend that Union Pacific do is: One, to have a
5 policy for work to rest ratios based on the
6 environmental conditions; and second would be
7 monitoring the environmental conditions on site and
8 doing so in a manner that would give you WBGT.

9 Q Are you acquainted with what an anemometer
10 is?

11 A Yes.

12 Q What is an anemometer?

13 A An anemometer is a device that can give you
14 the temperature and humidity.

15 MR. COX: Okay. That's all the questions
16 I have, Dr. Casa. Thank you, sir.

17 MR. SCHMITT: Just follow up with a few
18 and we'll be done.

19 REDIRECT EXAMINATION

20 BY MR. SCHMITT:

21 Q This anemometer, that's something that you
22 could use in connection with this WBGT analysis?

23 A The WBGT would eliminate the need for the
24 anemometer, the WBGT eliminates the need for an
25 anemometer or any kind of device that gives you the

1 other ones because the WBGT device gives you the three
2 temperatures you need.

3 Q Right. And again this WBGT is something
4 that you would recommend but you agree that that is
5 not something that's universally used in the industry?

6 A Yes.

7 Q As far as this fact that -- strike that.

8 Do you agree, Doctor, that it is possible
9 that if Mr. Whitt had been taken to the hospital
10 immediately from the job site that his ultimate
11 condition and his current condition, that that may
12 have been exactly the same as what it was given the
13 fact that he went back to the cooling station?

14 A I don't think it would have been the same.

15 Q All right. Do you agree with me that it
16 could be possible, I understand you don't believe it's
17 likely, but do you agree that it's possible that it
18 could have been?

19 MR. COX: Form and foundation. Calls for
20 speculation.

21 A It's possible but unlikely.

22 BY MR. SCHMITT:

23 Q All right. Do you also agree with me that
24 the condition that Mr. Whitt is currently complaining
25 of with his left upper extremity, that it may be

1 completely unrelated to his heat related incident?

2 MR. COX: Form and foundation.

3 A It's possible but unlikely.

4 BY MR. SCHMITT:

5 Q All right. You understand that some of the
6 treating doctors have identified and diagnosed his
7 condition as being carpal tunnel and tennis elbow, do
8 you understand that?

9 A Yes.

10 Q And of course carpal tunnel and tennis elbow
11 aren't caused by a heat stroke, are they?

12 MR. COX: Forms and foundation.

13 A No.

14 BY MR. SCHMITT:

15 Q All right. Doctor, I'm assuming this to be
16 the case but just let me make sure I'm clear, that
17 throughout the deposition anytime that I asked you
18 questions you always understood my questions and if I
19 asked a bad question you asked me to rephrase it or
20 get that straightened out before you actually answered
21 it?

22 A Completely understood the questions. They
23 were very well conducted.

24 Q Okay.

25 A The only thing is that the Ornellas I want

1 to substitute for Linford during the earlier part, so
2 the person who I believed first saw Jared and laid him
3 down and got him up and helped get him to the vehicle,
4 that was Ornellas.

5 MR. SCHMITT: Very good. That's all I
6 have.

7 MR. COX: Thank you, Doctor.

8 I'll take an etran and please attach all
9 of the exhibits to my copy.

10 And Doug, when you send me those new
11 exhibits send those to me so I can get those to
12 David.

13 THE WITNESS: Absolutely.

14 MR. COX: You have the right to read and
15 sign the deposition or waive reading and signing.

16 THE WITNESS: I want to read and sign.

17 THE COURT REPORTER: Do you want me to
18 send it to you or to the deponent?

19 MR. COX: You can send it to directly to
20 Dr. Casa.

21 THE COURT REPORTER: Okay.

22 THE WITNESS: I'll make these exhibits
23 here.

24 (Deposition concluded at 1:14 p.m.)
25

1 STATE OF CONNECTICUT

2 COUNTY OF TOLLAND

3
4 I, Julie Blier, a Notary Public in and
5 for the State of Connecticut, do hereby certify
6 that the above proceedings were reported by me
7 stenographically and this transcript represents a
8 true and accurate transcription of said
9 proceedings.

10 I further certify that I am not related
11 to the parties hereto or their counsel, and that
12 I am not in any way interested in the event of
13 said cause.

14 Dated at Hebron, Connecticut, this 13th
15 day of March, 2014.

16
17
18
19 _____
20 Julie Blier, BA, LCR
Notary Public
CT License No. 0093

21 My Commission Expires:
22 March 31, 2019
23
24
25

I N D E X

	WITNESS	DIRECT	CROSS	REDIRECT	RECROSS
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DOUGLAS CASA	3	203	208	-
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DEFENDANT'S EXHIBITS

FOR IDENTIFICATION

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10 (Original exhibits filed with original
11 transcript and copies made for each attorney)

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C E R T I F I C A T E O F D E P O N E N T

I, DOUGLAS CASA, Ph.D., have
read the foregoing transcript of the testimony
given and it is true and accurate to the best of
my knowledge as originally transcribed and/or
noted on the attached Errata Sheet.

DOUGLAS CASA, Ph.D.

Subscribed to and sworn to before me on
this ____ day of _____ ,
2014.

Notary Public

My Commission expires:

No. 8:12-CV-00358, JARED L. WHITT vs UNION PACIFIC
RAILROAD, DEPOSITION OF DOUGLAS CASA, Ph.D., February
28, 2014, (jb).